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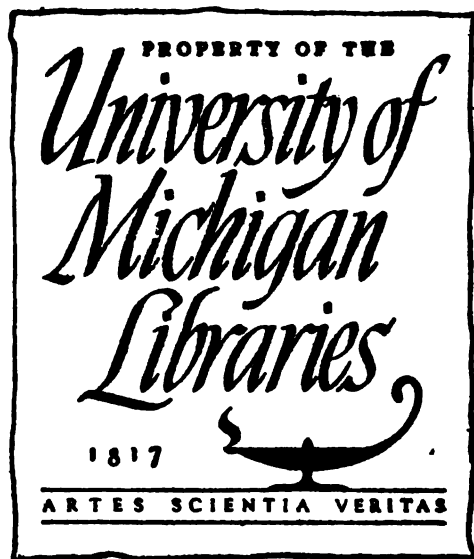
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**STRING, AND OTHER FORMS OF STRAND:
BASKETRY-, WOVEN BAG-, AND NET-WORK.**

BY

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THE NORTHERN PROTECTOR OF ABORIGINALS, QUEENSLAND.

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND.

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STRING, AND OTHER FORMS OF STRAND: BASKETRY-, WOVEN BAG-, AND NET-WORK.

1. String, etc., derived from Animal Products.—The binding and tying materials derived from animal products include human-, opossum-, and kangaroo-hair twine: kangaroo-tail, snake-neck, and emu-leg tendon.

2. The manufacture of human-hair twine as practised on the Morehead and Musgrave rivers, where the article is known as *ménangan*, may be described as follows:—The spindle (*ng-gái-aja*) is about 8 in. long, and made from a piece of grass-stem, etc., for “handle,” a “hook” of similar material being attached to its extremity by a piece of string, the “spindle-string,” the free end of which passes over the fork (Pl. I. 1). The hair, which has been cut off *short*, goes through no preparatory processes, beyond having been packed up tightly and kept dry: it is now teased out, and—as large a bundle as can comfortably be held there—enclosed in the palm of the left hand. The operator, usually but not invariably a woman, sits in the ordinary (for the female) squatting position. To make a commencement, the thumb and forefinger of the left hand entwine the free end of the spindle-string with a small pinch of hair stretched away (but not off) from the bundle in the palm. The fingers of the right hand next roll the handle end of the spindle *backwards*, along the outer side of the lower thigh, at the same time that the left-hand thumb rolls the free end of the spindle-string together with its entwined portion of hair (stretched away from the bundle) *forwards* onto the forefinger. The idea of this rolling into opposite directions is to increase the torsion of the newly-made strand as soon as the spindle-string and hair are twisted into continuity. The correspondingly simultaneous movements of either hand, though of course rapidly executed in the reality, may be analysed into their components parts as follows in the accompanying illustrations. Pl. I. 2 represents the positions assumed by the handle and spindle at commencement of the roll; Pl. I. 3 the positions, etc., at its conclusion; while Pl. I. 4 shows the thumb and forefinger lifting up the needle-handle in order to place it in suitable position to re-commence with. As the piece of hair between the left thumb and forefinger is thus used up, another pinch is again stretched away from (but not off) the bundle which thus acts as “feeder” to the newly-made hair-strand that is always maintained in as taut a position as possible. It thus happens that, as the right hand keeps on “rolling,” and the left hand continues “feeding,” the newly-made piece of hair-strand gets gradually longer, while at the same time the pinch of hair held between the left thumb and forefinger becomes correspondingly larger and “lumpier.” To prevent this latter contingency, the “lump” is every now and again carefully stretched out into the required shape, the handle of the spindle, during this process, being firmly gripped in the bend at the back of the knee: at the same time, to prevent the hair-strand slipping off the spindle-tip onto which, owing to increase in length it has been wound, it is always secured in the spindle-fork. The illustration Pl. I. 5 shows the operator in the act of reducing the “lump.” A succeeding length of hair-strand is similarly manufactured, wound, and similarly fixed on the spindle until a sufficient total length results, and here, wound round the spindle-tip in more or less of a ball, it is temporarily left. A second spindle is now taken, and a second length of hair-strand similarly manufactured, wound, and fixed on it. These two strands are next intertwined to form the permanent piece of hair-twine. By taking the free extremity of the hair-strand between the left thumb and forefinger it is unwound from the one spindle, but at the same time tightly re-wound onto the left wrist (Pl. I. 6), its spindle-string extremity being finally tied onto the free end of the hair-strand on the other spindle. Where these two ends are knotted, the strand is looped once or twice round a stick planted firmly into the ground (Pl. I. 7), and the operator walks slowly backwards, unwinding, as she recedes, the one hair-strand from her left wrist, and the other hair-strand from the spindle in her right hand. As soon as these two strands are finally unwound, *their* two ends are tied together so as to form what is now practically one endless string. She next squats down, and taking the last-tied extremities fixes them by means of the spindle-string onto her spindle, which she rolls, as at first, along the outer thigh with her right hand, at the same time that she stretches bit by bit, directs and rolls in an opposite direction (*i.e.*, to that of the spindle), the *two* strands with her left. As the finished hair-twine is thus gradually brought to a completion and correspondingly tightly wound onto the spindle-tip, she, of course, progressively shifts her position forwards towards the stick. From off the spindle-tip it is ultimately unwound into a tight ball. The two strands composing the completed hair-twine, thus twisted into similar direction, give rise to great elasticity: on the other hand, this method of procedure, in conjunction with the short lengths of hair employed, gives the twine a very rugged appearance. Hair-twine is employed here solely for tying on or over the affected parts in case of sickness: *e.g.*, headache, stomach-ache, etc.

3. At Boulia, Headingly, etc., the hair is cut off, thron by thron, cleaned, and teased out very much after the manner of horse-hair for a cushion: in this condition it is loosely wound round a stick, the whole then moistened, and when dry the “skein” removed and put aside. It is then wound, bit by bit, onto a spindle-fork which is not as yet rolled on the thigh, but twirled between the thumb and forefinger of the one hand raised, the other hand acting as “feeder”: from this spindle it is subsequently unwound into the form of a tight ball. Two such balls are now taken and put into a vessel containing water, and the extremities of each fixed onto a spindle-fork: these two hair-strands are guided over the first and third fingers to between the tips of the third finger and thumb of the left hand (Pl. I. 8), while the spindle is rolled with the right hand, on the outer thigh, as already described. The resulting double-twist hair-twine is now ready for use and putting up in skeins. The spindle as used here (the *mingko* of the Pitta-Pitta blacks) is a fine thin stick about 1 foot long and $\frac{1}{2}$ in. diameter, with a short wooden barb attached to its lower extremity by means of cement. Hair-twine in this district is made by men, and used principally for their waist-belts.

4. Opossum and Kangaroo Hair-twine.—On the middle Palmer river, where the soft down from the belly of the animal is employed, I watched a man making some opossum-twine with a spindle on exactly the same lines as that already described with human-hair twine-manufacture on the Musgrave, except that the motion of the spindle on the right thigh was reversed—i.e., instead of rolling the spindle backwards, it was rolled forwards. These Koko-minni blacks speak of both opossum- and kangaroo-hair twine as *aln-jo*: they use it for apron-belts, waist-belts, and a few other things. Opossum-string in the Western districts is, with very rare exceptions, both greased and raddled; the former material appears to preserve it from the ravages of minute vermin.

5. Kangaroo-tendon is obtained from the freshly-killed animal: indeed, so much so, that, other things equal, this is the first economic use to which the kangaroo is put. A nick is cut, or a bite made, as close as possible to the tip of the tail, and this portion steadily but firmly pulled off, the tendinous threads or films coming away with it. These are dried, and so carried about (the piece of bone with attached tendon may be seen often wrapped up in tea-tree bark for trade or ordinary transport purposes): when required for use, the tendon is moistened in the lips. Very commonly used throughout the North: especially for fixing the peg to the blade of the wommera, and for strengthening the morticing of the spear-shaft into the butt, etc.

Snake-neck and emu-leg tendon is used in the Boulia districts.

6. String, etc., derived from Vegetable Products.—This is made from the stems or complete plants, from the leaves, or from the bark.

As examples of the first series may be mentioned the *Spinifex hirsutus* made into the sieve-bags of the middle Palmer, etc., the *Panicum semialatum* of the Pennefather baskets, and the *Schænus melanostachys* composing the Logan and Stradbroke Island dilly-bags. The Atherton wallaby-traps and Cairns, etc., baskets are made from lengths of the split stems of the *Onclamus*, by a procedure somewhat as follows:—A convenient portion of the stem, after being rubbed all round with a stick to remove the "prickles," is clutched with the left hand: the adjoining ring of leaves is pulled sharply downwards and simultaneously twisted with the right hand, the result being that both leaves and cortical layer of stem are removed. More and more cane is thus dragged down and correspondingly cleaned. When a length of some 12 or 14 feet has been so treated, it is cut away and split, the splitting being effected by biting through with the teeth and pulling apart with the hands. Finer lengths may be split with the thumb-nail, mussel-shell, etc.

The second series includes the *Hæmodorum coccineum*, the split leaves of which compose the basket dilly-bags of Cooktown, etc. On the Bloomfield are to be met sieve-bags manufactured with fibre-strands obtained from the perfoliate bases of the leaf-petioles of the *Drymophloeus Normanbyi*, each fibre-strand being pulled out separately and cleaned by being passed through the thumb- and finger-nails. Cabbage-tree palm fibre-twine is made from the leaf-cortex of the *Livistona*.

Coming to the third category, that derived from bark, string, etc., can be obtained from its outer or inner portions. In the former class may be mentioned the strips of tea-tree bark (*Melaleuca* sp.) used everywhere for binding, and of the *Entada scandens*, for climbing purposes, at Mapoon. The inner bark, however, generally from the trunk, occasionally from the roots, is that from which most of the aboriginal fibre-twines are manufactured.

The following list comprises some of the plants whence string, strands, and cognate materials are obtained: they have been identified for me by the Colonial Botanist, Mr. F. M. Bailey. Where known to me, the native names are given.

N.B.—The abbreviations used may be represented thus:

Bld.	=	Bloomfield River.	B's H.	=	Butcher's Hill (Boggy Creek).
C. Bd.	=	Cape Bedford.	C. Gr.	=	Cape Grafton.
Ckn.	=	Cooktown.	Penn. R.	=	Pennefather (Coen) River.
KYE	=	Koko-yellangi blacks to be found at	B's H. Bld.		
KMI	=	Koko-minni	(Middle) Palmer River.		
KUN	=	Kundara	Coast between mouths of Staaten and Nassau Rivers.		
KYI	=	Koko-yimidir	Ckn., C. Bd., etc.		
KRA	=	Koko-rarmul			
KWA	=	Koko-wara			
KLA	=	Koko-lama-lama			
KUG	=	Kungganji blacks	Hinterland and coast of Princess Charlotte Bay.		
NGG	=	Nggerikudi	C. Gr.		
NGI	=	Ngalkungo	Pennefather and Batavia Rivers.		
NGA	=	Ngatchan	Atherton, etc.		
CHI	=	Chirpal			
MAL	=	Mallanpara	Lower Tully River.		

Abutilon otocarpum, F. v. M.—The bark is peeled off and scraped clean with mussel-shells, used for making strong netting for game. Cloncurry. (E. Palmer.)

Acacia flavescens, A. Cunn.—Fibre employed for the twine used in making dilly-bags (Cape Bedford). Manufactured from the bark (of the young trees), which is put into salt or brackish water for a couple of hours, or rather until such time as it gets quite red, and then placed in the sun to dry. It is next split into the necessary lengths and thicknesses required, and finally rolled. This fibre is either employed wholly to weave the bag, or else (especially in the hour-glass patterns) woven alternately with *Malaisia* or *Sterculia* fibre to produce a horizontally striped pattern. KYI, C. Bd., dun-dul; Ckn., tun-jol.

Acacia latifolia, Benth.—Its fibre (see sect. 7) is used both for fishing-nets (Musgrave, etc.) and dilly-bags. In the latter case, may be employed in conjunction with *Livistona*, *Malaisia*, or *Sterculia* fibre. KRA, bé-wal; KWA, yú-a-bal; KYI, C. Bd., dun-dul.

Acacia leptocarpa, A. Cunn.—Fibre obtained from the inner bark, which is washed in water before being dried in the sun. KMI, i-wá-wal.

- Acacia lysiphloea*, F. v. M.—Made up in the dry from the inner bark. KMI, r-te.
- Barringtonia racemosa*, Gaudich.—Apron-belts are made of this material on the Musgrave, dilly-bags at Cooktown.
- Calamus australis*, Mart.—“Large lawyer-cane.” The stems are split for wallaby and fish traps, etc., in the Cairns District.
- Calamus caryotoides*, Mart.—“Small lawyer-cane.” Stems split for dilly-bags in Cairns District.
- Careya australis*, F. v. M.—The middle Palmer, Kokominni, blacks make from it the twine for tying up the corpses in the troughs, the mourning strings, and the tassels of the women’s apron-belts. The Pennefather R. aborigines use it for fish-nets and women’s apron-belts.
- Cochlospermum Gillivraei*, Benth.—Bark used by the Atherton blacks for making fibre-rope with. NGI, CHI, Ath., pú-kuru; NGA, Ath., ké-wan; KMI, po-áta; KUN, unggal.
- Dryophloeus Normanbyi*, F. v. M.—“Black palm.” For sieve-bags on the Bloomfield.
- Entada scandens*, Benth.—Bark strips for tree-climbing at Mapoon.
- Ficus Cunninghamii*, Miq.—A reddish twine, for the dilly-bags, made from the dried inner bark of the roots: on the Pennefather.
- Ficus fasciculata*, F. v. M.—The twine is manufactured just like the *Macaranga*, and made into dilly-bags on the Morehead and Starcke Rivers.
- Ficus hispida*, Linn.—From the inner bark. MAL, wo-o.
- Ficus nitida*.—Made in the dry, a white twine, for dilly-bags. NGG, dórtalama.
- Ficus orbicularis* (var.).—Inner bark (dried) made into white string for the dilly-bags on the Pennefather River.
- Ficus platypoda*, A. Cunn.—Fibre for dilly-bags.
- Hæmodorum coccineum*, R. Br.—“Blood-root.” The dried leaves are moistened just before use, when they are split into thin strips with the finger-nails. Made up into dilly-bags, sieve-bags. KRA, timpar; KYI, tan-dai; KMI, anto; NGG, lé-ana; KYE, Bld., ma-tún.
- Hardenbergia retusa*, Benth.—At Cape Bedford the blacks skin the roots: they then bite and suck these skins until they are dry, and ready for being unravelled, twisted, and rolled.
- Heleocharis sphacelata*, R. Br.—Stems are split for making the dilly-bags (mbái-a) on the Pennefather River: in the same district the stems are employed whole for making mats.
- Hibiscus panduriformis*, Burm.—The bark is peeled off, cleaned, and twisted into twine, and into bags for carrying roots, game, etc. Mitchell R. (E. Palmer.)
- Hibiscus tiliaceus*, Linn.—Inner bark for making the ropes for the turtle-harpoon on the Pennefather River, for fibre-twine at Cooktown. NGG, kornbrana; KYI, Ckn., mamindur; MAL, mancha— for fishing lines, and tying bait on hooks.
- Imperata arundinacea*, Cyr.—At Cape Bedford, the long leaves, dried in the sun, are put into fresh water, and split. These lengths are made up into dilly-bags, which are called dirnbur, the name of the plant itself. KYI, C. Bd., dirnbur.
- Livistona australis*, Mart.—At Princess Charlotte Bay, the young as-yet unopened leaf shoot is cut off as low down and as cleanly as possible, and then smartly tapped upon a piece of log: the shoot thus becomes unfolded, and can then be conveniently split along its natural folds. The outer cortex is next stripped off from each septum of leaf by means of a finely-pointed ironwood pointer or pin, or else with a sharp kangaroo-bone drill: these cortical strippings are, by a process to be subsequently described, rolled in the dry, after exposure to the sun, neither sputum nor water being used. For fish-nets and dilly-bags, Princess Charlotte Bay and North generally.
- Macaranga tanarius*, Muell. Arg.—(See sect. 7.) Twine for dilly-bags, on the Musgrave. KRA, do-angal.
- Malaisia tortuosa*, Blanco.—Fibre-twine (see sect. 7) for folding-purse nets among the Kokolamalama, fishing-lines on the Pennefather River, for dilly-bags, apron-belts, and mops. For native name, see Mops.
- Melaleuca leucadendron*, Linn., and other species.—Strips of the bark for binding with—a very common material for this.
- Pandanus aquaticus*, F. v. M.—The young leaves are split and woven into dilly-bags, sometimes after steeping a little in water. (E. Palmer.)
- Pandanus*, sp.—Leaves split into various widths for armlets (plaited or plain), for plaitwork (Musgrave, Cape Bedford, etc.), for dilly-bag handles (Pennefather, Moreton, etc.), for sieve-bags (Middle Palmer River), for smoothing over the gum-cement attaching the barb to the spear (Cooktown), for mat-cloaks (Pennefather River), etc.
- Panicum leucophæum*, H. B. et K.—The fibrous under-part of the leaf is peeled off when young, and twisted with the fingers as it is drawn off into a thread, and used to make twine. Cloncurry. (E. Palmer.)
- Panicum semialatum*, R. Br.—Stalks used entire for baskets on the Pennefather River. NGG, lo-thi.
- Panicum trachyrachis*, Benth.—The fibre is peeled from the under surface of the leaf, by breaking it in the middle across with a sudden jerk while held between the fingers, and drawing the threads away. They are twisted up at once into twine. Mitchell R. (E. Palmer.)
- Psoralea archerii*, F. v. M.—The plant is pulled, soaked some hours in water, and left to dry, when the bark peels and is kept for use, for cordage and strong twine. Cloncurry. (E. Palmer.)
- Psoralea patens*, A. Cunn.—The plant is collected into thick bundles, each tied round with string, the whole being then immersed in water for several days, with rocks or stones on top to prevent them being washed away. Its fine outer cortex is next stripped off the stems, one at a time, and beaten up and teased out until such time as it becomes quite soft, when it is sun-dried and rolled into skeins. The *kalo* of the Pitta-Pitta (Boulia) natives.

Schœnus melanostachyus, R. Br.—Stems for the dilly-bags of Stradbroke Island.

Spinifex hirsutus, Labill.—Stems for dilly-bags on the Starcke River.

Sterculia caudata, Hew.—Fibre-twine from the bark is used for dilly-bags or (on the Princess Charlotte Bay coast, among the Koko-lamalama) for fish-nets.

Sterculia diversifolia, G. Don.—Fibre-twine made from the inner bark, dried in the sun, and drawn into shreds, for dilly-bags. KMI, kalan.

Sterculia quadrifida, R. Br.—Fibre-twine used for the large kangaroo-nets at Atherton. NGI, CHI, Ath., pu-kuru; NGA, Ath., ke-wan—same names as the *Cochlospermum*.

Sterculia rupestris, Benth.—Fibre-twine for the Rockhampton fish-nets. (A. Thozet.)

Sterculia rupestris, Benth.—Fibre made into nets. (A. Thozet.)

Xerotes longifolia, R. Br.—A narrow leaved form of this is used on the Starcke River and on Bloomfield for making dilly-bags. KYI (Starcke River), bai-jin, the same name given at Cooktown to the

Spinifex hirsutus; KYI, Ckn., tan-dai, same name applied here to the *Hæmodorum coccineum*; KYE, Bld., tan-di; MAL, chindirigan.

Xerotes multiflora, R. Br.—For dilly-bags. KYE, Bld. (young sp.), tan-di; KYE, Bld. (old sp.), mau-u.

7. The Manufacture of Fibre-twine consists of two processes: The actual preparation of the fibre-shred, and its subsequent manipulation into twine.

(a) The former can be best explained by taking, at random, some three or four plants, as follows:—

(i.) *Macaranga tanarius*.—A fairly smooth switch is cut down, and stripped of its bark envelope. The strip is next sharply broken at an angle (Pl. II. 1), the process enabling the immediately-underlying "fibre" to be separated (Pl. II. 2) from its pigmentary covering, which is removed and cast aside. The shreds of fibre, in quantity as may be required, are washed and rinsed for a few minutes "to make milk come out"—the water turning cloudy—and then dried in the sun. When fully desiccated, each shred is finally split with the nails until the desired fineness is obtained (Pl. II. 3); each comes out ultimately to a length of 8 to 10 in. and more.

(ii.) *Mulaisia tortuosa* produces a greenish-coloured twine when freshly manufactured. The thin outermost covering of bark is scraped off with a sharp mussel-shell (or glass, when obtainable), and the underlying greenish fibrous layer stripped off in narrow lengths of from 1½ to 2 feet. Each green strip is next put into the mouth and chewed, the verdant spittle being expectorated: the chewing-process, which requires some two or three minutes for its completion, renders the strip suitable for immediate splitting with the nails into the shreds of particular fineness required.

(iii.) *Acacia latifolia*.—A reddish twine when fresh. Here, the inner bark, after removal, is soaked in water all the morning, during which process it becomes red: it is subsequently dried in the sun before being split into shreds.

(iv.) *Barringtonia racemosa*.—The roots only are used. The thick rough cortical layer is sliced off in strips from the under surface of which the white shreddy fibre is pulled off; the latter is washed and rubbed for a few minutes in water (which becomes quite milky), and then dried in the sun. As soon as it becomes dry, it is split into the required shreds, and is ready to use.

(v.) *Livistona australis*.—The method of obtaining the fibre-shred from the cortex of the leaf has already been described (sect. 6).

(b) The subsequent manipulation of the fibre-shred into twine can now be explained. The shred of fibre (Pl. II. 3) from any one of the above plants having been at last obtained, it is rolled with the open hand (right) forwards upon the outer side of the thigh—the operator seated in the usual "squatting" position. This movement produces a slight tension, increases its strength, minimises all irregularities, and produces (Pl. II. 4) what may now be spoken of as the strand. The strand is next folded in two (Pl. II. 5) and the "bend" held between the (left) thumb and forefinger: its remainder is rolled, under considerable pressure, with the (right) palm once comparatively-slowly forwards (Pl. II. 6.) and, without removing the pressure, once somewhat-sharply backwards (Pl. II. 7). During the former movement, pressure is exerted specially upon the outer (*i.e.*, thumb) side of the palm: during the latter, upon the inner side. The result of the forwards-movement is to roll the strand into one uniform twist (Pl. II. 8): the result of the combined forwards-and-backwards movement is to roll the strand into two twists (Pl. II. 9) of an opposite direction with a "break" in between. The removal of this "break" is effected by holding the portion just above it between the (left) thumb and forefinger (to prevent the twine already manufactured from becoming untwisted) and inserting in it (Pl. II. 10) the (right) forefinger which is pulled firmly but carefully outwards, thus at the same time freeing the two extremities of strand. While the left hand retains its present position, the two extremities of strand are again rolled once forwards, and once backwards, the "break" removed as before, and the process thus repeated again and again. All fibre-twines are thus made of two plies. It is hardly necessary to point out that the presence of the "break" prevents the twine already manufactured from becoming untwisted each time the left hand shifts its position onwards. As soon as one of the extremities of strand under consideration has been reached, another strand is fixed to it (Pl. II. 11) by a simple rolling-forwards: this composite one is then rolled into the other as before.

8. Methods of Preserving Continuity in the Twine, etc.—To effect this purpose, various devices are resorted to, viz.:—

(a) Super-position (Pl. III. 1, 2). Seen in the boly or handles of certain dilly-bags, etc.

(b) Splicing, etc. Opening the plies at the extremity of a piece of twine, and rolling it in, as part and parcel. Identical with the process adopted in the manufacture of fibre-twine, at the insertion of each new strand.

- (c) Looping (Pl. III. 3). The method adopted in fastening the tendon, twine, etc., round the butt-end of a wommera-spear, the mortice of "compound" spears (*i.e.*, those formed of shaft and butt), etc.
- (d) Knotting—
- (i.) "Granny," which is extremely common, and a good example of which is to be met with on the inside of the simple kind of *Pandanus* leaf armlet (Pl. IV. 5).
 - (ii.) "Button," as seen in the kangaroo-twined waist-belts of the Middle Palmer, where each is made of two plies and one end knotted: the latter forms the "button," the other extremity the "button-hole" (Pl. III. 4). It will be noticed that the tighter the belt is stretched, the narrower and firmer becomes the "button-hole."
 - (iii.) "Complex" knot of the Logan and Stradbroke Island dilly-bags (Pl. XVIII. and XIX.)
 - (iv.) "Slip" knot of the Keppel Island, etc., fishing-net (Pl. XIII. 3), and that used with the lawyer-cane by the Lower Tully River blacks (Pl. III. 5).

[Notwithstanding very careful examination, I have never come across an example of "reef" knot].

- (e) Splitting. This procedure can be observed in the *Pandanus* simple-armlets of Cape Bedford, the Musgrave and Morehead, (Middle) Palmer Rivers, Maytown, etc.

The strip of *Pandanus* leaf (Pl. IV. 1) is cut vertically at one extremity, but obtusely at the other, its width tapering gradually from the former to the latter. The obtuse end is then split into four, six, or more "tags" to a uniform vertical depth. The vertical end is now rolled over the hand (Pl. IV. 2) from two to three times—varying with its length—then removed as it is, and held between the thumb and forefinger (Pl. IV. 3), when, with a sharpened stick, some small holes, depending upon the number of tags, are pierced through its two or three thicknesses. Each tag is now pulled through its respective aperture (Pl. IV. 4),—a process that has been facilitated by cutting the main strip obliquely originally so as to give a fine point to the tags—each pair then knotted underneath (Pl. IV. 5) in a "granny," and their ends cut.

- (f) Cement-substance, beeswax, etc., is often employed not only to fix two strands when super-imposed, but also to strengthen the union when otherwise put into continuity.

9. Colouration of the Twine, etc.—While some fibre-twines, when newly-manufactured are distinctly red (*e.g.*, *Acacia flavescens*, *latifolia*, and *leptocarpa*, *Ficus Cunninghamii*), green (*e.g.*, *Malaisia tortuosa*), or whitish (*e.g.*, *Ficus orbicularis*, *Liristona australis*), others may be coloured by mechanical means. This is effected either by staining or by pigmentation. In the former process, the *Hæmodorum coccineum* is employed on the Bloomfield, the *Morinda reticulata* on the Pennefather River: in both cases, it is the roots which are utilised. In the latter, the basis is either water, sputum, wax, or grease. Out in the Boulia district all opossum-twined articles (with but rare exceptions) are greased with "raddle."

10. Procedures in which string and other forms of strand are employed include plait-work, chain-work, over-knotting, fringing, winding, lacing, top-stitching or over-casting, basketry-, woven bag-, and net-work.

11. Plait-work has been met with on the Morehead and Musgrave Rivers, and at Cape Bedford. At the former, it is practised by females only in the making of necklaces (*al-wúra*): at the latter, it appears to be considered rather as a pastime or plaything for the boys, the girls there not engaging in it. In the dilly-bags obtained from the Embley River, Moreton, etc., the handles are made of three-strand plaits. In the case of the necklaces and playthings, according to the width of plait required, from three to five strands are brought into requisition. Thin strips from the leaf of the screw-palm (*Pandanus*) constitute the material usually employed, though at Cape Bedford I obtained one specimen made of the folded blades of the blood-root (*Hæmodorum coccineum*, R. Br.). When the *Pandanus* is used, the leaf is dried in the sun to make it firmer, though to save time (and the alternative is almost as good) it is more often heated for a few minutes over a fire. At the commencement of operations, the strands are either continuous (Pl. V. 1, 2), or free (Pl. V. 3, 4): the four-plait is sometimes made of two strands folded over at their centres (Pl. V. 3). At Cape Bedford, the strands may be tied into a bundle by one of their own number (Pl. V. 4). When this flat-plaited band is at length completed in order to make a necklace, a string of some sort is attached at either extremity, and by this means it is fixed at the back of the neck: in the case of playthings, the extremity may be tied upon itself in a knot. The actual length of these plaits is up to 8 to 9 in. in the case of necklaces, while in the "playthings" it may run to 18 in.; its uniform width varies proportionately from $\frac{1}{4}$ in. to 1 in. and more. Plait-work is also employed by aborigines in making the *Pandanus* compound-armlet on the Embley River, at the Moreton, and on the higher reaches of the Batavia River. No opportunity was afforded me of watching its manufacture, but by unpicking a specimen I found it to be constructed on the following lines (Pl. V. 5). A broadish band or strip (*a*) of *Pandanus* leaf forms the basis upon which three smaller strips (*b*) are laid, these being fixed in position by the web (*c*) working in and out as in the diagram.

12. Chain-work is to be found amongst the Cooktown, Cape Bedford, and Princess Charlotte Bay aborigines in the mourning-strings (Pl. VI. 1) worn by male and female mourners crossways over one shoulder and under the opposite arm-pit. These "chains," so to speak, may be several yards in length, each link about $\frac{1}{4}$ in. long, but smaller in the more northern specimens; they are made of fibre-twined. The initial loop is fixed either into a knot (*a*) at the commencement of the string, or in between its two component plies (*b*): the knot at the extremity (*z*.) locks the entire chain. Another form of chain-work is seen in the orchid-cortex belt of the blacks on the (Lower) Batavia and Embley Rivers: it is made by overcasting two strands stretched between two sticks, or between one stick and the big toe: as the overcasting thread works under and over, it alternately passes over and under the strip of cortex.

In diagram, its manufacture would be represented somewhat as in Pl. VI. 2. In the (Lower) Tully River lawyer-cane armlets, two more varieties of chain-work are met with. In the former (Pl. VI. 3) the pattern covers the whole circumference of ornament; in the latter (Pl. VI. 4), the chain, which is formed of a series of loops, occupies but a portion of the armlet.

13. "Over-knotting": there is no other adequate term to describe this. Examples were seen by me in old camps at the Starcke River, and on the Princess Charlotte Bay coast, close to the mouth of the Normanby. Both of them were cases of old leaf-scale troughs which, having commenced to split, had been mended as follows:—Through the six (in one case) pairs of holes punctured on either side of the split (Pl. VII. 1), a corresponding number of strands had been knotted on the outer surface. These knots were of the "granny" type, but, evidently to prevent them loosening, the free ends of each strand had been fixed by the knot immediately succeeding. The appearance of the inner surface is shown in Pl. VII. 2. In a Starcke River example, the strand was made from the split leaves of the *Hemodorum occineum*.

14. Fringing.—Fringes are met with on all apron-belts and certain necklets. There are three stages in the construction of an apron-belt—the making of the top-string, the formation of the loops, and the rolling of each loop upon the outer thigh to form a tassel. At Cape Bedford, the details of its construction are represented in Plate VII. Fig. 3 shows the method of holding the circular band over the two knees; 4, the formation of the loops; and 5, the rolling of each loop into a tassel. At the present juncture it is only the formation of the loops, ultimately constituting the fringe, which concerns us, this method of fixation onto the top-string being identical with that met with at Cooktown, Maytown, Princess Charlotte Bay, (Middle) Palmer River, etc. At Boulia, on the other hand, the loops are fixed in a somewhat different manner (Pl. VII. 6).

15. Winding.—Examples of this are to be found in the mourning-strings of Maytown, (Middle) Palmer River, etc., the belt portion of very many apron-belts, in the circlets and armlets of Boulia, etc., in the rope-belts of Cloncurry, etc. (Pl. VII. 7). The core may be single or multiple, and formed of human- or opossum- hair, fibre-twine, etc.

16. Lacing.—This is well illustrated in the bark water- and honey- bags of the Atherton, Cairns, etc., Districts (Pl. VII. 8). Also in the bark-troughs when enclosing a corpse at the Musgrave, Coen, Cooktown, etc.

17. Top-stitching, or Over-casting.—In the finishing-off of the mouth of many dilly-bags. See Pl. X. 5, Pl. XVI. 10, etc.

18. Basketry-, Woven bag-, and Net-work.—It has been deemed advisable to place all the articles comprised under the above heading in one category, for the reason that, from a constructive point of view, they are all woven on one or other of identical lines. Inflexible baskets formed of withes are found exactly reproduced in flexible bags composed of fibre-twine: fishing-nets, in their primitive form, are really netted bags, the condition in which they may still be found.

The special meanings to be attached to the three terms "strand," "continuous," "non-continuous," and "basal" may be defined as follows:—

"Strand," as a matter of convenience in this and subsequent sections, will be employed to denote collectively the many different materials—*e.g.*, hair, fibre, leaf-blade, withes—of which these articles are woven, netted, etc.

"Continuous" is used in the sense that when the extremity of the strand has been reached another piece is entwined, super-imposed, or otherwise affixed in such a manner that the various component pieces ultimately constitute one apparently continuous length.

In a "Non-Continuous" strand there is a break in the continuity purposely made—a special kind of knot—for decorative, perhaps other, purposes (Plates XVIII. and XIX.).

"Basal" strand is that which constitutes the basis of operations, and is either in the form of a cross-tie stretched between two sticks (with its equivalents) or in the form of a circlet: hence, we can distinguish a "straight" from a "circular" basal strand. [The Koko-yimidar blacks of Cape Bedford, etc., speak of the basal strand as the "father"—*cf.* our "foundation."] The sticks used in connection with the cross-tie are fixed firmly into the ground at a distance apart of from a few inches (in the case of some dilly-bags) to as much as five or six feet (in certain fish-nets), and are correspondingly smaller and larger. In some of the patterns the straight basal strand may be ultimately withdrawn. The circular basal strand is identical with the "stirrup" of the European netter, and is either fixed, like it, to some support, or else held in position by passing the leg, big toe, etc., through it: it usually remains as it is, part and parcel of the manufactured article.

To preserve uniformity in the diagrams illustrating this section, these abbreviations will be used throughout—YZ, the two sticks; CS, the continuous strand, of which there may be one or two; NC, the non-continuous strand; SB, the straight basal strand; CB, the circular basal strand.

According to the process of construction, the following classification of basketry-, woven bag-, and net-work may prove satisfactory:—

A. Made with one continuous strand.

(a) basal strand, straight.

- Var. i. Simple loop.
- ii. Loop and twist.
- iii. Hour-glass (double loop.)
- iv. Netting-stitch.

(b) basal strand, circular.

- Var. i. Simple loop.
- ii. Netting-stitch.

B. Made with two continuous strands.

- | | |
|--------------------------------------|-------------------|
| (a) no basal strand. | Var. Simple loop. |
| (b) one basal strand, circular. | Var. Simple loop. |
| (c) several basal strands, straight. | Var. Chain-twist. |

C. Made with one continuous and one non-continuous strand.

- (a) basal strand, circular.

D. Made with one non-continuous strand.

- (a) basal strand, circular.

Upon this basis the manufacture of each will now be detailed. It should be noted that the examples met with under C and D, coming from the Logan and Stradbroke Island, do not strictly belong to a work on *North Queensland Ethnography*; on the other hand, they form important links in the history of basketry, and, as their manufacture in the original form is rapidly being lost, their inclusion here has been determined upon.

19. Made with one continuous strand: basal strand straight.—This includes four varieties, according to the nature of the mesh, which may consist of a simple loop, a loop with twist, a double loop ("hour-glass"), or of the ordinary European netting-stitch.

20. The first variety, that of the "simple loop" pattern, is met with in dilly-bags manufactured at Boulia, Morehead and Musgrave Rivers, Rockhampton. The operator, squatting in the ordinary position, fixes the continuous strand on the extreme left of the straight basal strand, and, working always from left to right, starts as in Pl. VIII. 1. So soon as the right-hand limit of the basal strand has been reached, the continuous strand is fixed in a loop. Then either the sticks are taken up bodily (Pl. VIII. 2), with the attached cross-tie, and turned right round—*i.e.*, the right one made the left and *vice versa*; or the sticks are left in position, while the basal strand is slipped off, and tied on again in the reverse position. In either case the same object is attained—*viz.*, the operator can, without shifting her position, start again from left to right at the point where (he or, usually) she had just left off (Pl. VIII. 3), these two rows ultimately constituting the bottom of the bag. When the operator again reaches the extreme right-hand limit of the basal strand, this or the sticks are again reversed, and thus, by a continuous repetition of the process, the weaving of the one continuous strand into the horizontal row of loops immediately above may be continued until the desired depth of bag is attained. The basal strand is ultimately withdrawn. The finished pattern is shown in Pl. VIII. 4. [In the making of modern lace, I am informed that this mesh is known as the "Point de Bruxelles" or "single net-stitch worked in rows."]

21. The second variety, that of the "loop and twist" mesh, is seen in dilly-bags made at Laura, Maytown, Highbury, Musgrave, Coen, Gilbert River, Delta, Normanton. These bags are manufactured on lines similar to the preceding, Pl. IX. 1, 2: the completed pattern [said to be similar to the foundation of modern "Point de Tulle"] is seen in Pl. IX. 3.

22. The "hour-glass," or "double loop," the third variety of pattern, is met with in dilly-bags and fishing-nets. The former come from Normanton, Delta, Gilbert River, Cooktown, Cape Bedford, Cape Melville, Morehead, Musgrave, and Middle Palmer Rivers, Bloomfield, perhaps Rockhampton: the latter from Laura, Maytown, Palmerville, Morehead and Musgrave Rivers, Pennefather, Embley, and Batavia Rivers. Manufactured as before (Pl. X. 1, 2): the completed pattern is shown in Pl. X. 3. In the case of dilly-bags, at least two methods may be adopted for "finishing off" purposes: these are indicated in Pl. X. 4, 5.

23. The "netting-stitch," or fourth variety of mesh, is observable in dilly-bags made at Normanton, Delta, Gilbert River, Musgrave and Morehead Rivers, Cape Melville, Middle Palmer River, Rockhampton, Yeppoon: in the folding-purse fishing-nets of Princess Charlotte Bay: in the fishing-nets of Boulia, Cloncurry, and Normanton: in the false head-net or hair-cap of Boulia and Upper Georgina River: in the forehead-nets of the same districts: in the kangaroo-nets of Atherton: in the emu-nets of Boulia, etc.

The dilly-bags (as well as the other articles in the category) are woven on lines similar to the preceding examples (Pl. XI. 1, 2, 3), but with this modification that the initial extremity of the continuous strand is not attached to the basal strand when operations are commenced. A start is made at some distance away (Pl. XI. 1), the proximal portion alone passing over the basal strand onto which, when the extreme right-hand limit has been reached, it is ultimately fixed (Pl. XI. 2).

The folding-purse fishing-net of Princess Charlotte Bay is made on exactly identical plan and pattern as the dilly-bags, but of course on much larger scale.

The fishing-nets of Boulia, Cloncurry, Normanton, etc., have a still further modification in that, after completion of the first row of meshes, they are worked on the flat (Pl. XI. 4) into the shape of a rectangular parallelogram. [On the Tully River, the first row of meshes may be woven on a stirrup, a circular basal strand: but when completed, the row is invariably removed, put on a lawyer-cane fixed horizontally, and worked in the usual way from left to right.] In some of the Normanton, etc., fishing-nets, increased depth of net is obtained by top-stitching certain portions of the edges, the portions so attached being shown with corresponding numbers in Pl. XI. 5.

The "false" head-net or hair-cap of Boulia and the Upper Georgina is made out of the rectangular piece of net-length by top-stitching the two smaller edges and inserting a running string through the meshes of the long edge, which, by this means, is now tightened up (Pl. XI. 6, 7).

The forehead-net of Boulia and Upper Georgina is woven on lines identical with the fishing-nets of Boulia, Cloncurry, Normanton, etc., *i.e.*, on the flat. The only difference is that the loops constituting the initial and final rows are comparatively much longer than those occupying the body of the net (Pl. XII. 1). After removal from the straight basal strand, the loops of these initial and final rows may each be rolled into a tassel before being ultimately threaded (Pl. XII. 2): or they may be threaded as they are (Pl. XII. 3).

With regard to the large kangaroo- and emu-nets, I have seen part of the manufacture of a specimen at Boulia. No true needle whatever was used, both this and the mesh-stick being substituted as follows:—The former was replaced by the thick cord being rolled as required upon a twig or two about 18 in. long; the place of the latter was taken by the maker's foot, which kept each successive mesh, as it was netted, perfectly firm and regular by pulling on it with the back of the ankle.

24. Made with one continuous strand: basal strand circular.—This form of manufacture is adopted with two varieties of mesh, the "simple loop" and the netting-stitch.

25. The "simple loop" variety is to be seen in the dilly-bags from Boulia, the Upper Georgina River, and Camooweal, and in the "true" head-net or hair-cap of the Boulia district blacks. With the bags (Pl. XIII. 1), the first row of meshes constitutes the mouth of the article, the last manufactured ones being stitched together to form the bottom: a reversal from the processes already described. In the "true" head-net, the loops in the first row are made much longer than all the succeeding ones; each loop, of this same row, is subsequently removed from the circular basal strand, rolled like a fringe tassel, and then restrung (Pl. XIII. 2).

26. The "netting stitch" variety is met with in the fishing-nets of Keppel Island, Rockhampton, etc. There is an initial row of slip-knots onto the loops of which the pattern proper is worked (Pl. XIII. 3). South of Rockhampton, *e.g.*, Gladstone and Miriam Vale, I noticed the fish-nets in the blacks' camps to be made with a stirrup, a circular basal strand, without the initial row of slip-knots: *i.e.*, on identical lines as a European fish-net.

27. Made with two continuous strands: no basal strand.—The only variety so far met with in the dilly-bags of the central coastal districts from Gladstone to Broomsound, is of the "simple loop" mesh. The proximal extremity of the larger and less pliable strand (CSi.) is bent round upon itself, and held in position by the smaller and more pliable one (CSii.) woven around it (Pl. XIV. 1). This smaller one, as the manufacture of the bag progresses, supports the spirally concentric coils of the larger in its loops (Pl. XIV. 2). To prevent the completed pattern assuming and maintaining a flattened surface, a small wooden pin (*k*) is fixed through the initial coils of the larger strand, and the desired convexity thereby insured. With the gradually increasing size of coils, the width of each succeeding loop would proportionately increase, and to guard against this "weakness" the loop of the smaller strand is here and there not fixed around the coil immediately above, but around the second or third beyond (*l*).

28. Made with two continuous strands: one basal strand, circular.—In the dilly- and pituri-bags of the North-West Central (Boulia) district: all of the "simple loop" variety of mesh, and mostly of a navicular shape.

The circular basal strand, the "stirrup," ultimately forms the mouth of the bag. After a row (or two) of simple-loop meshes have been woven with the one continuous strand (CSi.), a second one is affixed (CSii.), and the wallet thus woven round and round (Pl. XV. 1), mostly becoming larger and larger as it progresses, the free edges of the last manufactured row being ultimately stitched, etc., together to form the bottom of the bag. The completed pattern is seen in Pl. XV. 2. Attached to the mouth of these bags is sometimes an arrangement of peculiar loops whereby, with the aid of a running string, the aperture can be more or less closed. These loops are inserted as follows (Pl. XV. 3):—Starting from a point *k* on the circular basal strand, and working from left to right, the new strand is carried right round the mouth of the bag in a series of simple loops to *l*, where it is fixed: thence, with a series of longer loops, each with a double turn, it is again carried right round, and finally knotted. The free extremity of each of these longer loops is now twisted (Pl. XV. 4)—the torsion simultaneously tightening up the row of smaller loops—and each fixed in its new position by means of the running string *m*.

29. Made with two continuous strands: several basal strands, straight.—A variety which may be spoken of as the "chain-twist" formed by the twisting into a chain of the two continuous strands. Occasionally, in place of these two being separate and distinct, and tied with a knot, the one strand is bent on itself, the flexure replacing the knot, and the two halves the two continuous strands (Pl. XVI. 1, 6, 7). The straight basal strands are not attached to any sticks, etc., but their ends left free: they constitute the "warp" of modern basket-work, the chain-twist representing the "weft." [Amongst the Koko-yimidar blacks of Cape Bedford, etc., this form of warp is spoken of as the "beard," and the weft as the "back-bone."] This method of construction is met with in dilly-bags from various parts of North Queensland, in the mats of the Batavia and Pennefather Rivers, and in the fish- and wallaby-traps of Atherton, Cairns, etc. The bags here referred to are generally non-pliable, *i.e.*, modern basket-type: but they may occasionally be made of pliable fibre-twine. Variations in the pattern differ in the main amongst themselves only in the methods by which the base of the receptacle is commenced, *i.e.*, the initial fixation of the basal strands.

In the dilly-bags from the Starcke, Middle Morehead, and Middle Palmer Rivers, the two continuous strands are knotted together at some distance from their extremities, and held between the left thumb and forefinger. One basal strand, at about its middle, is placed in the fork of the knot, the two continuous ones twisted round it and pressed in the fingers: another basal strand is fixed as before, and so on. (Pl. XVI. 2.) A certain number of basal strands having been included, working all the time of course from left to right, the two horizontal strands make a sharp double twist round the last inserted basal one, which is simultaneously bent into more or less of an acute angle. The length, so far manufactured, is then turned round so that the extremity furthest removed from the knot is held in the operator's left thumb and forefinger, while the second row of the chain-twist is made by picking up from left to right each basal strand in regular rotation: the operation is thus continued and repeated (Pl. XVI. 3).

The "half-moon" shaped dilly-bags of the Cairns, Atherton, etc., districts are constructed on similar lines save that the basal strands extend the entire width of the base (Pl. XVI. 4), this portion being fixed into a curved shape by means of a piece of split lawyer-cane (with its extremities strung like a bow) attached by top-stitching to its inner surface. These same dilly-bags are in addition strengthened (as their manufacture proceeds) by rings of cane similarly attached on the inside.

In the round baskets from Hughenden, Charters Towers, the Tully River, etc., the chain-twist of two continuous strands surrounds a bundle of three or four basal strands to start with, the gradual development of their commencing radiation being shown in Pl. XVI. 5, 6, 7. As in the other forms of this chain-twist pattern, where the intervening spaces between the warp becomes too large, extra pieces are put in to preserve the shape required. In the articles from these districts, *i.e.*, Hughenden, Charters Towers, and the Tully, the rows of chain-twist are very close together as compared with those manufactured in other localities.

In the dilly-bags from the Bloomfield, Cooktown, Cape Bedford, and the Middle Palmer, and the back of Princess Charlotte Bay, the basal strands are tied into a sort of bundle (Pl. XVI. 8).

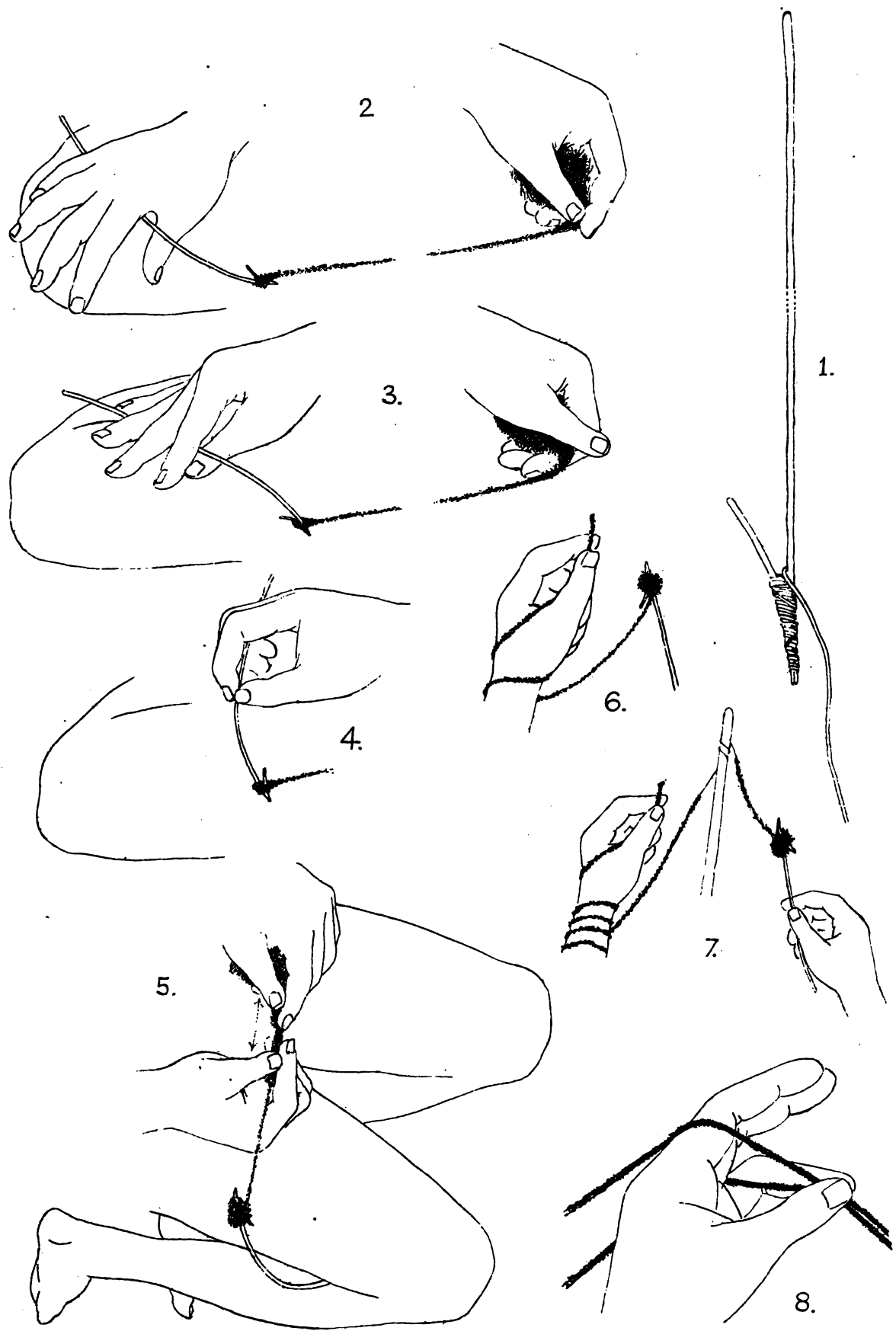
Methods in vogue for finishing off these basket dilly-bags are:—

- (a) Searing in the ashes, common (Pl. XVI. 9);
- (b) Over-casting, common (Pl. XVI. 10);
- (c) Doubling-over and fixing with a chain-twist (Pennefather, Batavia, and Embley Rivers) (Pl. XVI. 11).

In the manufacture of the Cairns, Atherton, etc., fish- and wallaby-traps or cages, the operator, after having sorted the lawyer-cane strips into similar lengths, commences by flexing three or four of the basal strands very acutely (forming ultimately the pointed extremity of the "cage"), and then fixing them by "wattling" the two continuous cane-strands in and out—*i.e.*, by a chain-twist (Pl. XVII. 1). This latter, thus being continued, gives rise to a pretty spiral, terminating at the mouth, additional basal strands being added in as required. In the Atherton, etc., fish-traps, when the mouth of the "cage" is finally reached, the free ends of the basal strands are cut at equal lengths, and bent outwards (Pl. XVII. 2). In the wallaby-traps (Pl. XVII. 3) of the corresponding districts, the basal strands projecting from beyond the lower portion of the mouth are cut off short and firmly bound, while those of the top and sides are trimmed off in such a way as to form a projecting funnel or hood, this being supported and edged by an extra withe attached along the inner surface. These traps take between three and four hours to make.

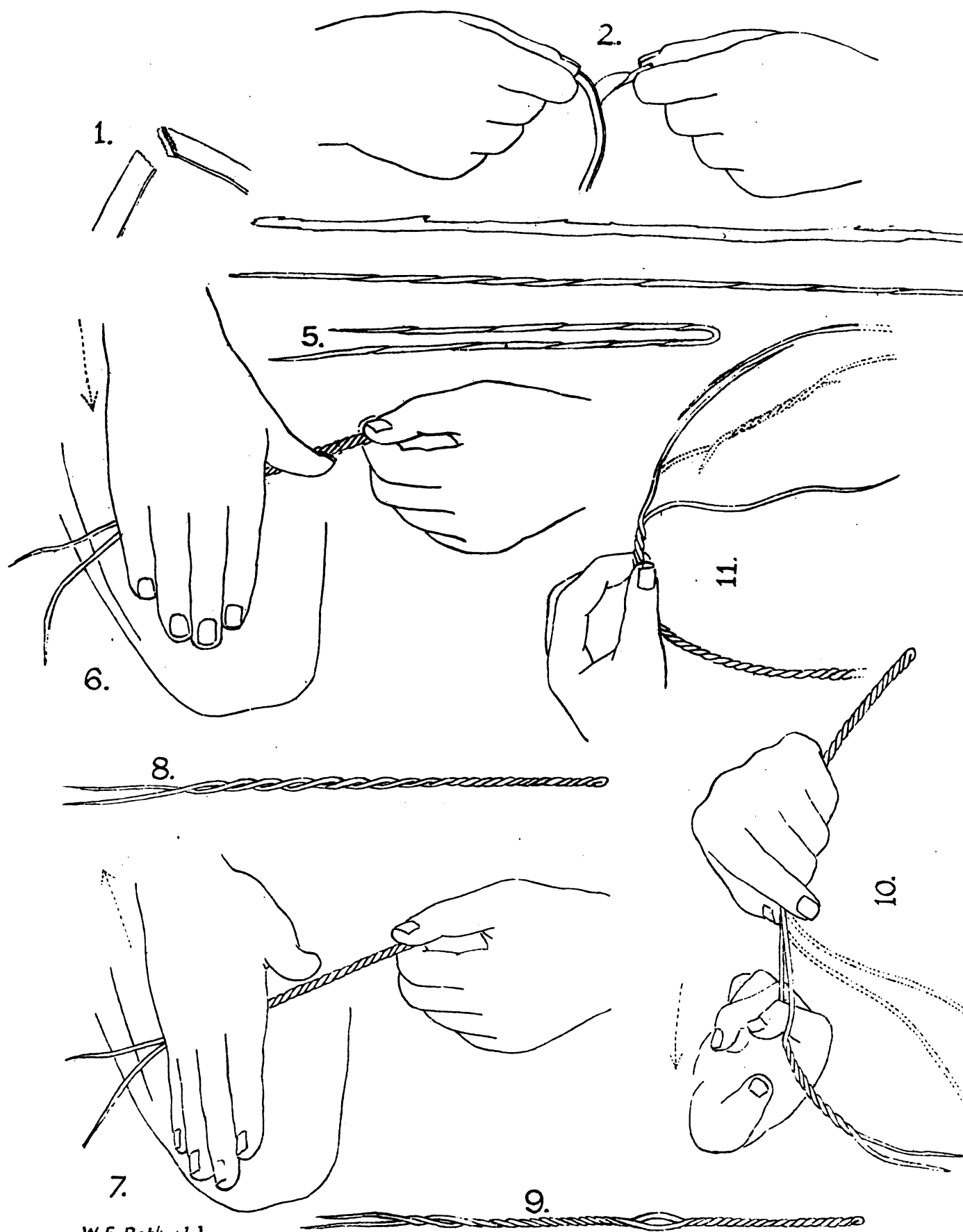
30. Made with one continuous and one non-continuous strand.—In the dilly-bags of Stradbroke Island, adopted from the mainland Logan blacks [see section 18]. Here, the non-continuous strand is formed of component pieces of equal lengths, attached by means of a very interesting knot (Pl. XVIII. 1). To make a start, the piece of non-continuous strand is fixed at a point just to the left of the ordinary knot joining the two ends of the **circular basal strand** (Pl. XVIII. 2), through which the leg is passed, and woven on it in the form of "**simple loops**" to its full length. The next piece of non-continuous strand is attached to the previous piece and to the "stirrup"—circular basal strand—by the knot already depicted, a process which is repeated as each length of non-continuous strand is utilised. In this particular case it requires three lengths of non-continuous strand to form the first row of loops. The continuous strand is now run in, and that also looped up just like the pattern of mesh described in section 28. Each length of non-continuous strand, however, is so arranged that its peculiar terminal knot is made on the loop immediately to the left of the corresponding knot in the row just above, with the result that the dilly-bag ultimately shows a pattern of three diagonal rows of knots. The bag is thus made somewhat after the shape of a broad napkin-ring, the initial edges of which are subsequently top-stitched to form the bottom of the bag, handles being attached to the final rim (Pl. XVIII. 3, 4).

31. Made with one non-continuous strand.—Observable in the dilly-bags which my friend, Mr. George Watkins, of Brisbane, tells me were made by the women of Stradbroke Island [speaking Tchandi and Mundan]: he says that they were manufactured from swamp-rushes which were cleaned, soaked in water for a little time, subsequently dried, and then toughened over hot ashes. The mode of construction, into a "broad napkin-ring" (Pl. XIX. 3, 4), is similar to that of the pattern just described: *i.e.*, on a **circular basal strand**. Each horizontal row is constituted of four lengths of non-continuous strand woven on the "**simple-loop**" pattern, but the loops in this case are markedly drawn to one side, so as to produce a vertical appearance (Pl. XIX. 1). Each length of non-continuous strand is attached to its lateral neighbour by means of a terminal knot identical with that met with in the previous pattern, and, like it, enclosing the loop above (Pl. XIX. 2): the placing of these knots diagonally is also similar. In the specimen under consideration the two final rows (ultimately forming the top of the bag) alone are devoid of knot, these being woven on the same pattern of mesh as described in section 28.



W.E. Roth del.

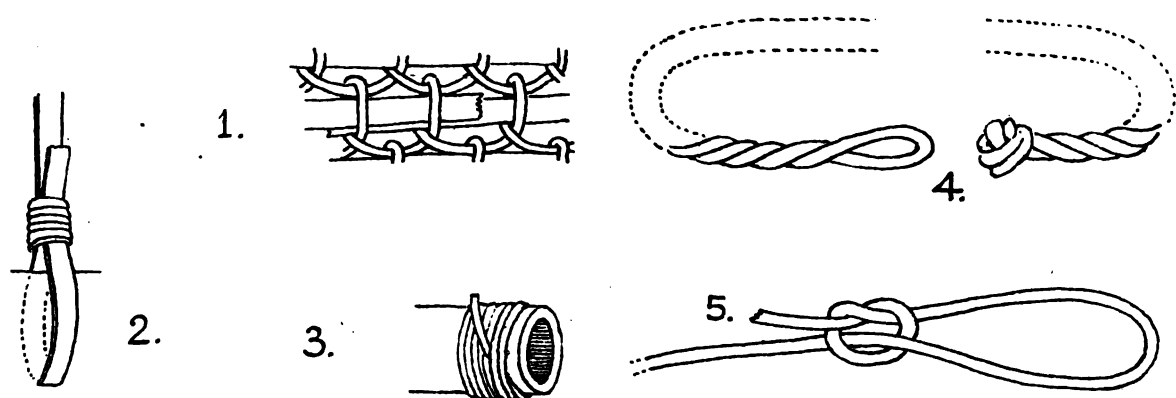
Plate I. The Manufacture of Human-hair Twine.



W.E. Roth. del.

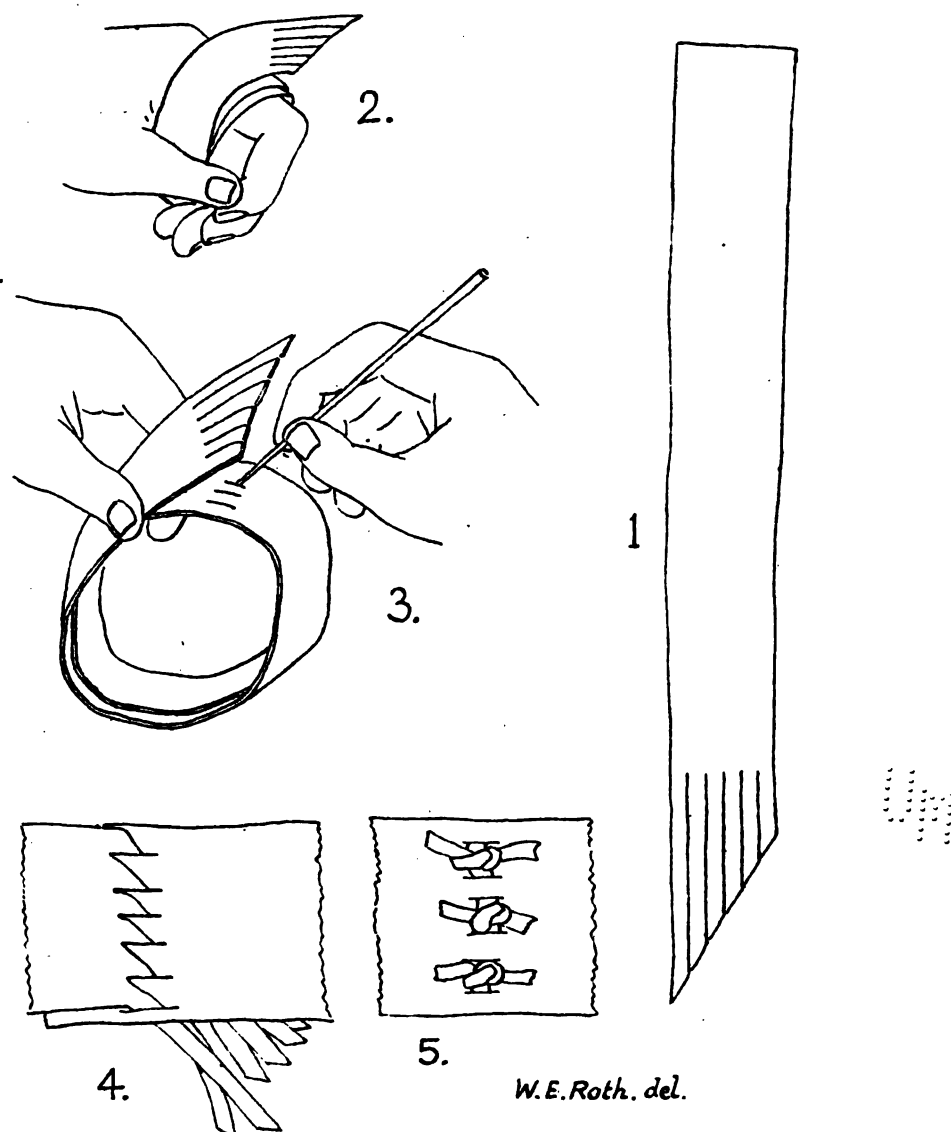
Plate II. The Manufacture of Fibre-twine.





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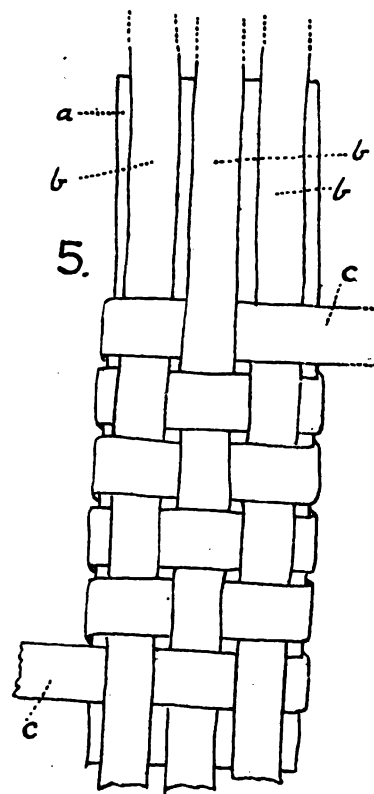
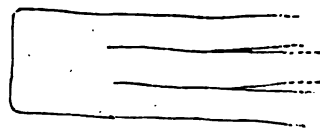
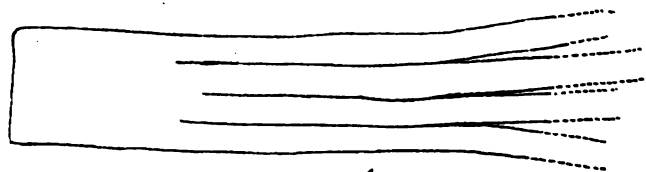
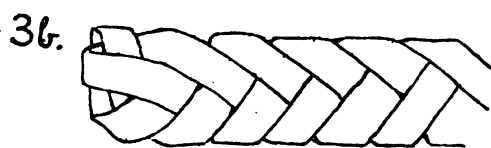
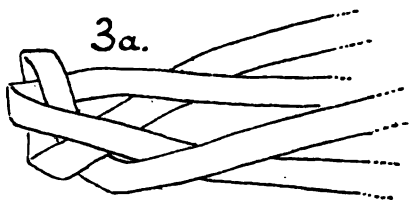
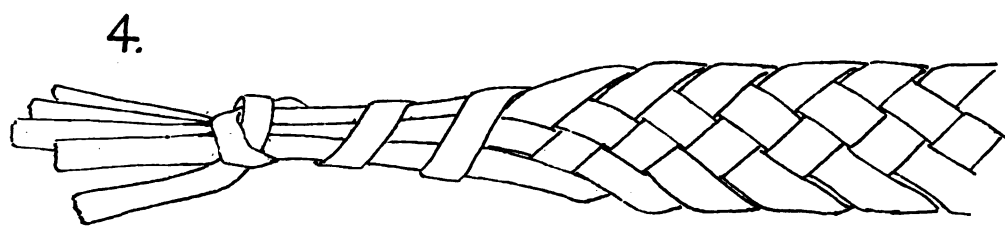
Plate III. Methods of preserving Continuity.



W.E.Roth. del.

Plate IV. The Manufacture of the Pandarus Simple Armlet.

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W.E. Roth. del.

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Plate V. Plait-work.

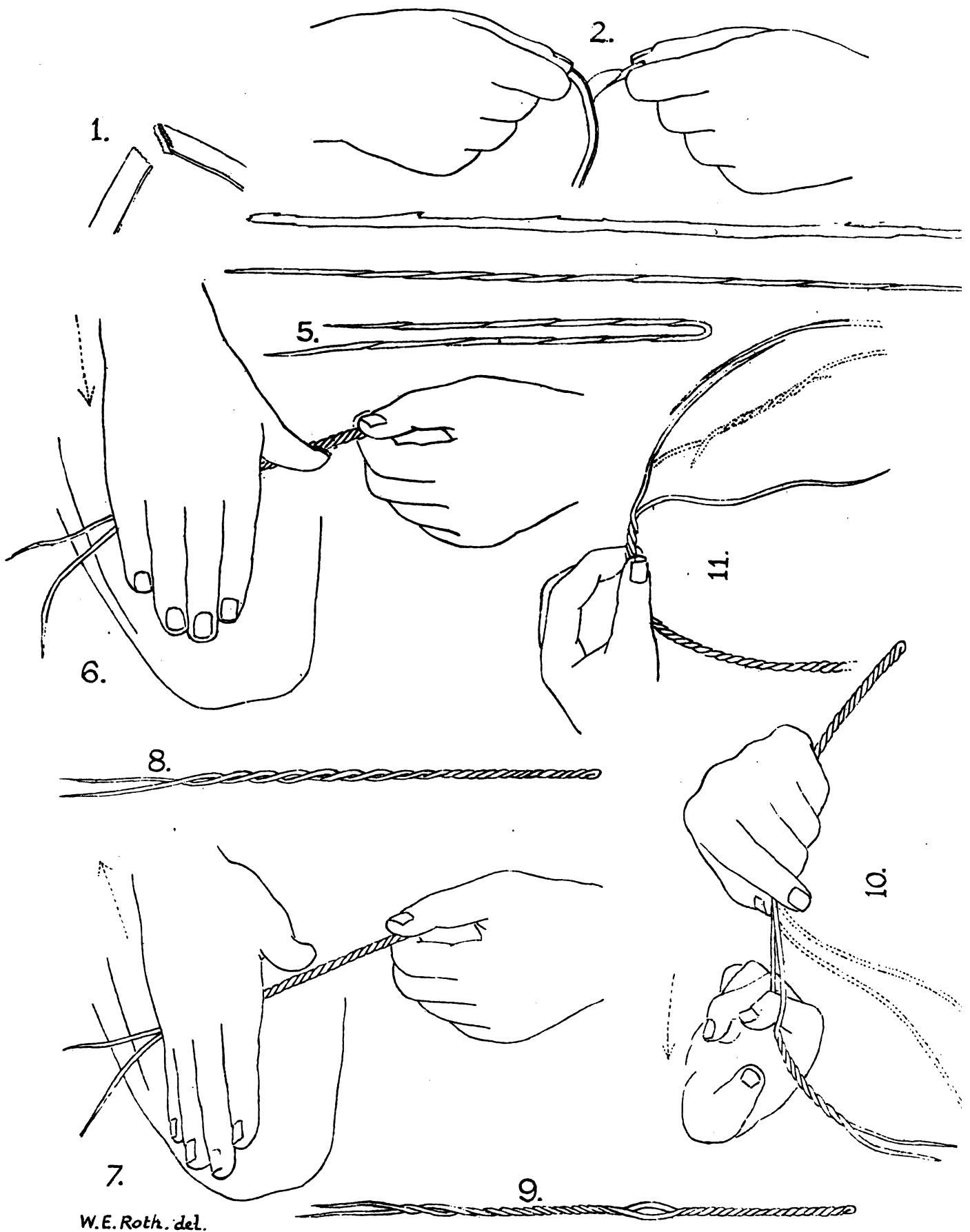


Plate II. The Manufacture of Fibre-twine.

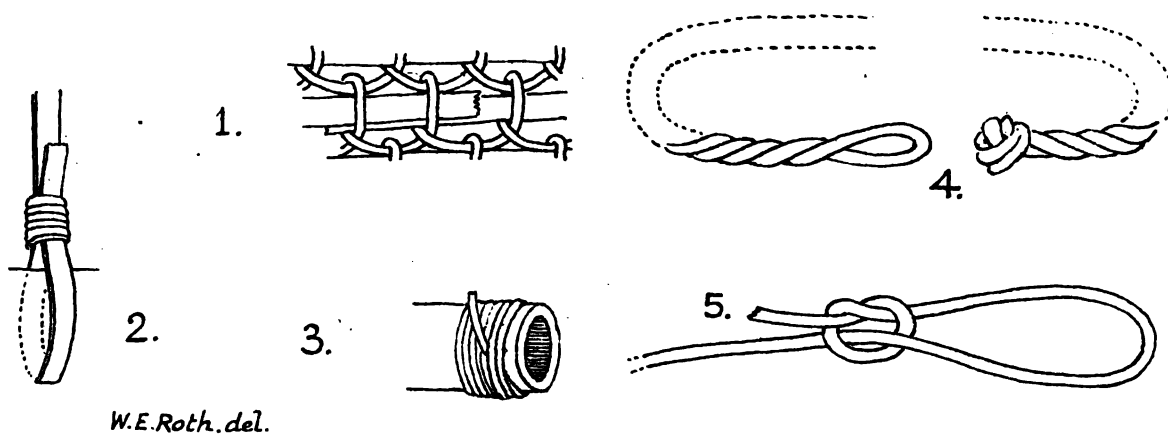


Plate III. Methods of preserving Continuity.

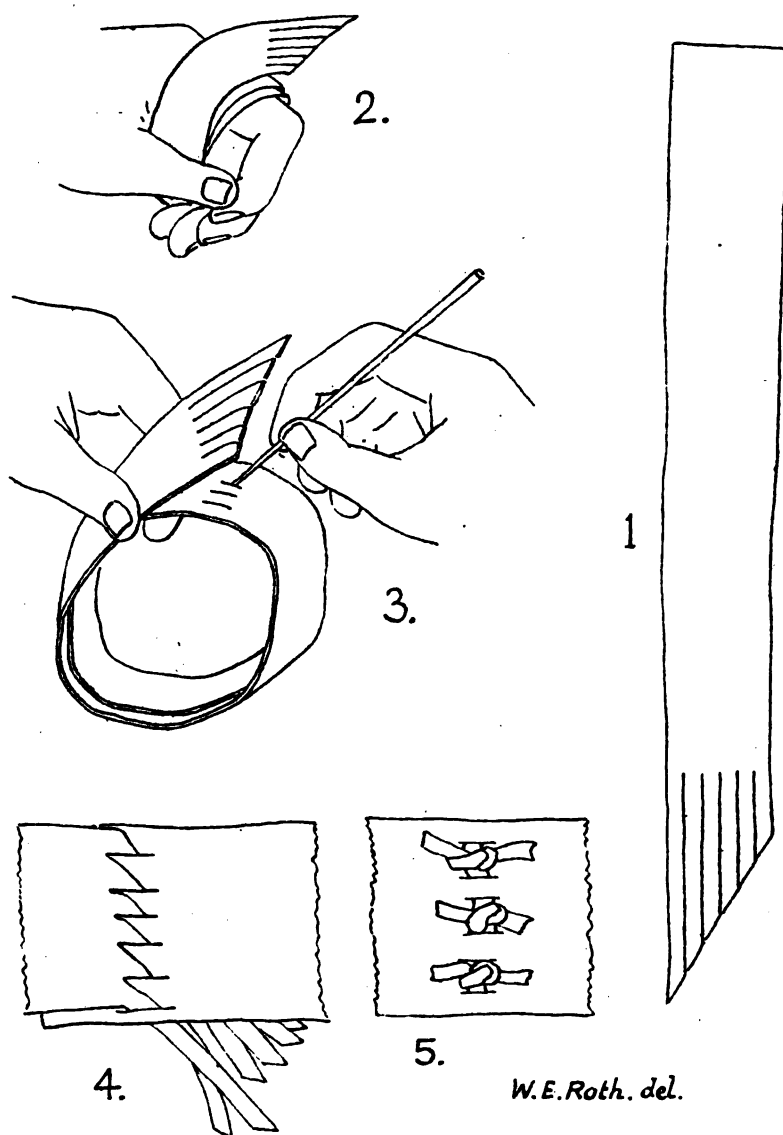
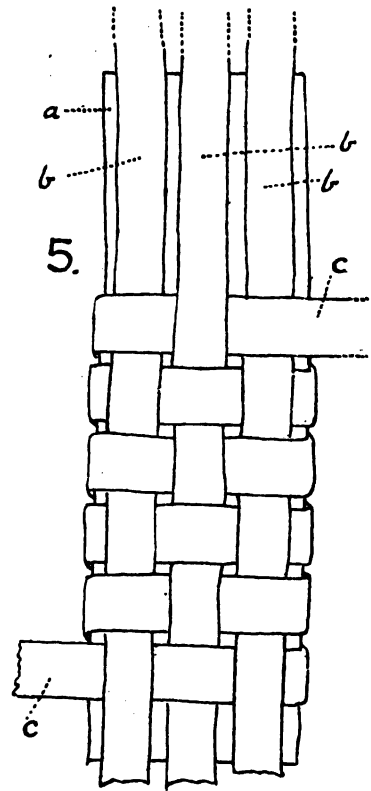
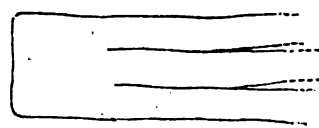
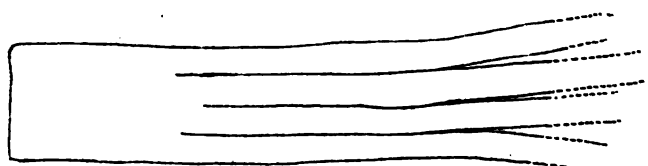
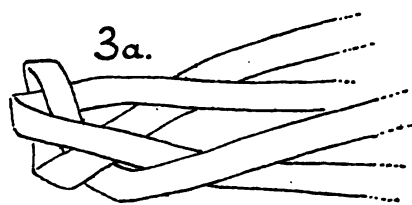
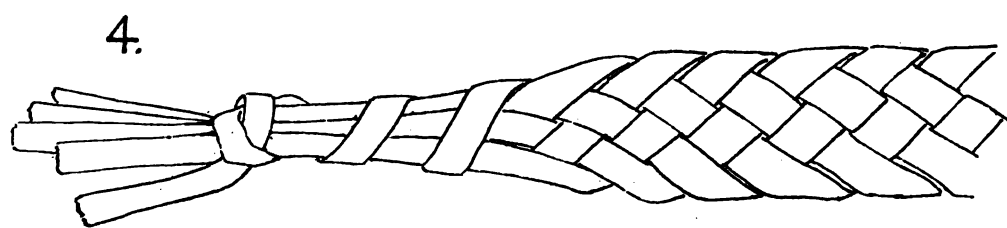


Plate IV. The Manufacture of the Pandanus Simple Armlet.

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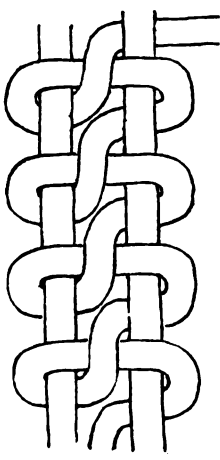


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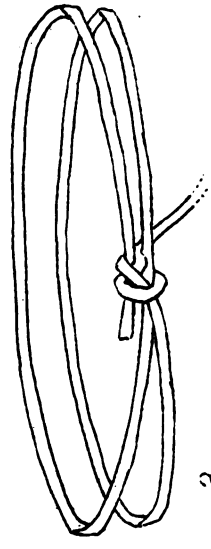
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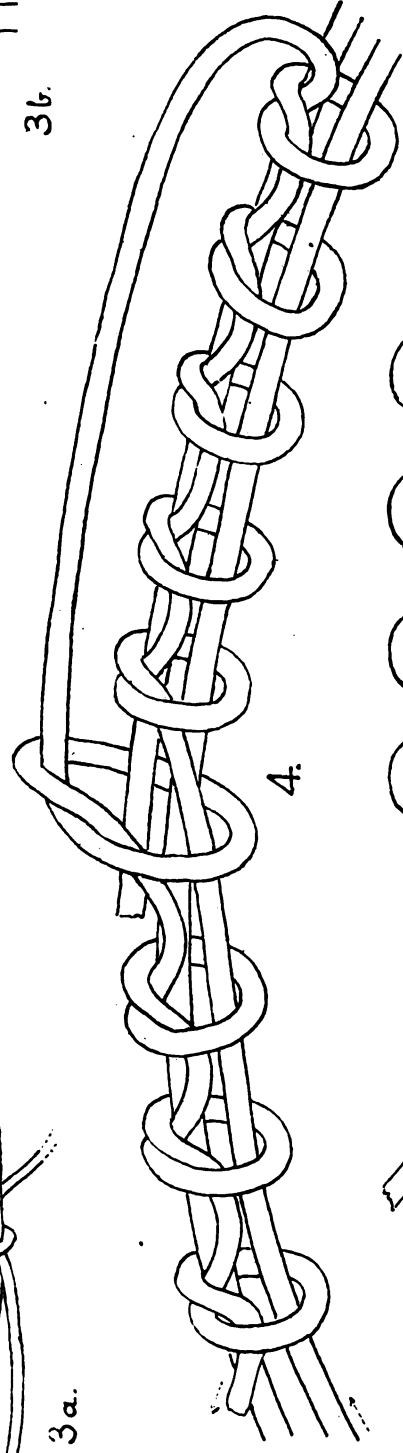
Plate V. Platt-work.



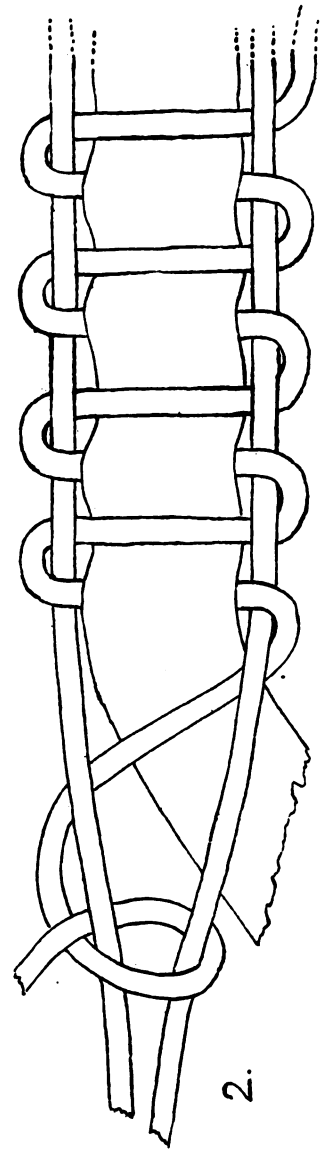
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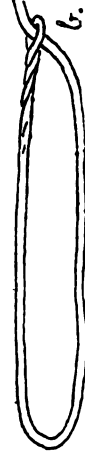
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W.E. Roth. del.

Plate VI. Chain-work.

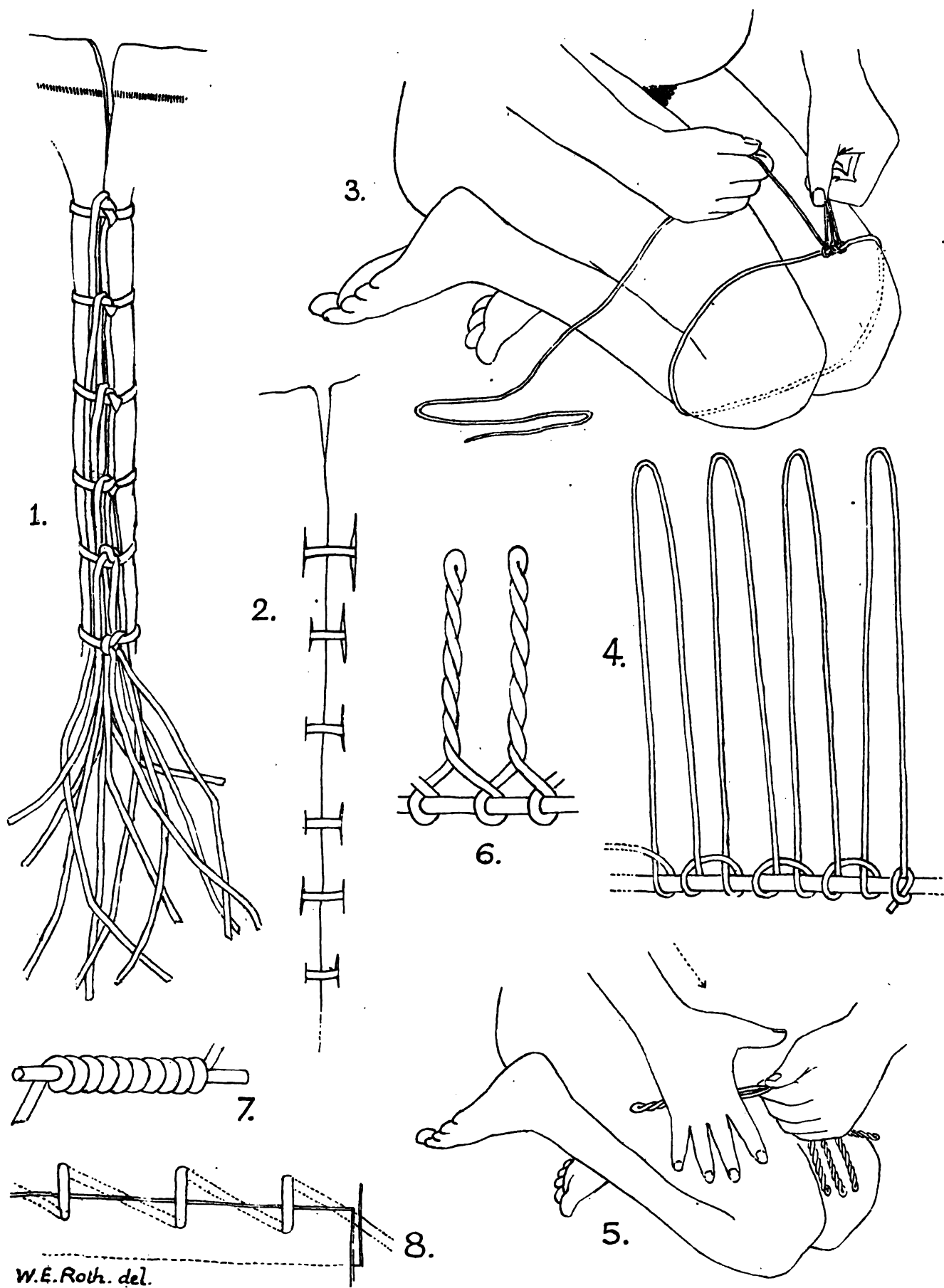
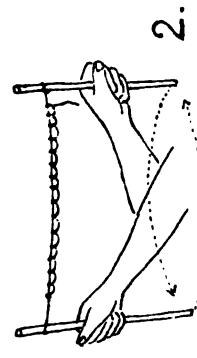
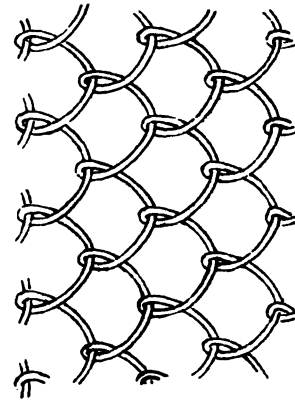
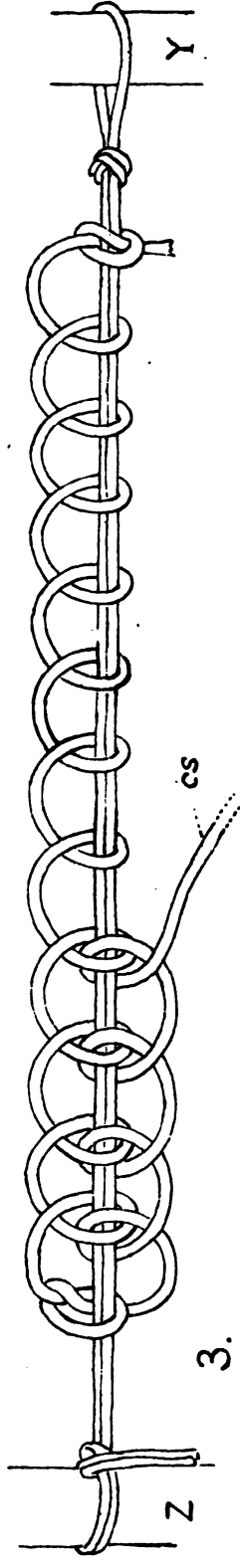
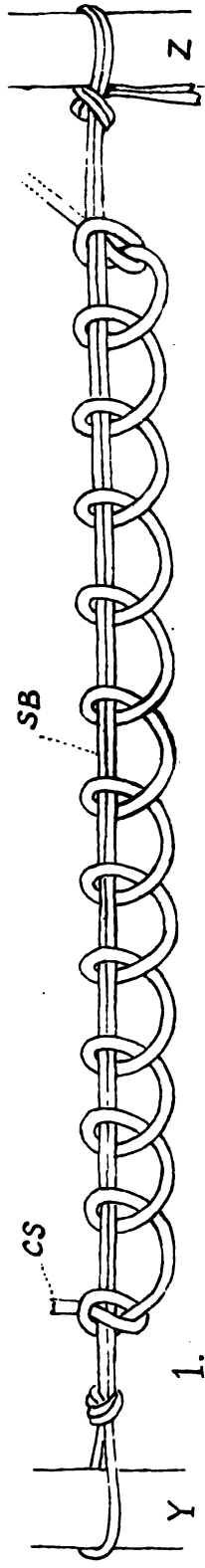


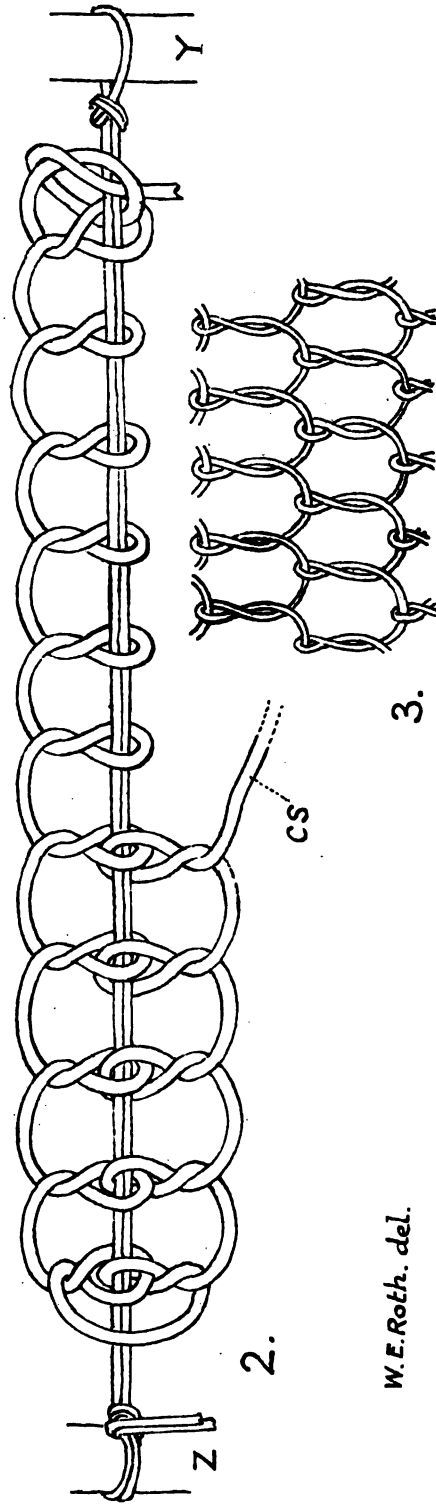
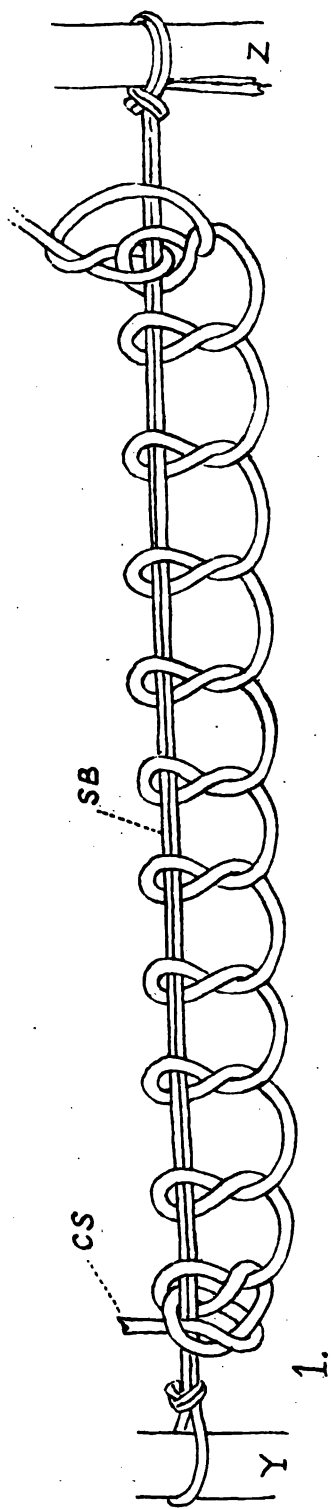
Plate VII. Over-knotting, Fringing, Winding, Lacing, Top-Stitching



W. E. Roth. del.

Plate VIII. Basketry, &c. — Made with one continuous strand: basal strand straight: simple-loop pattern.

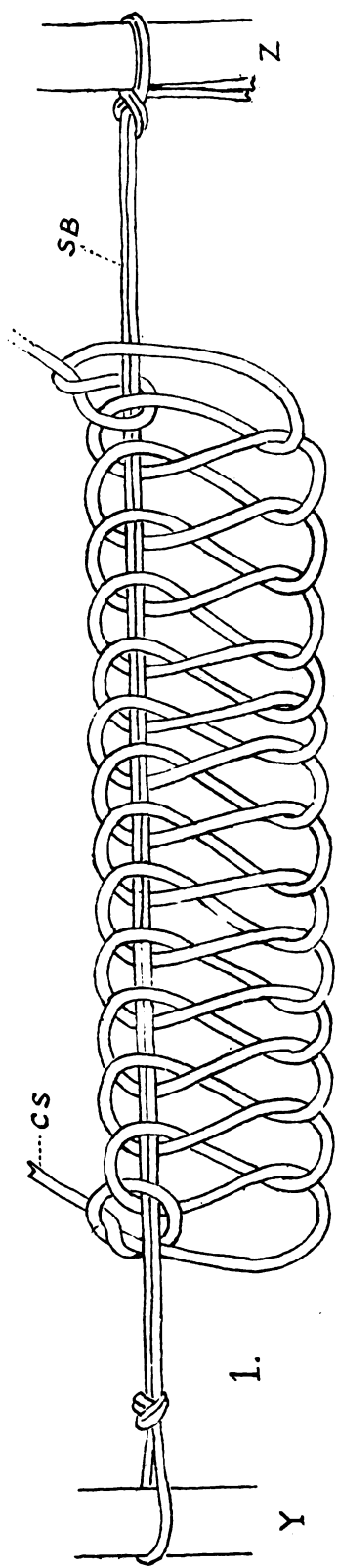
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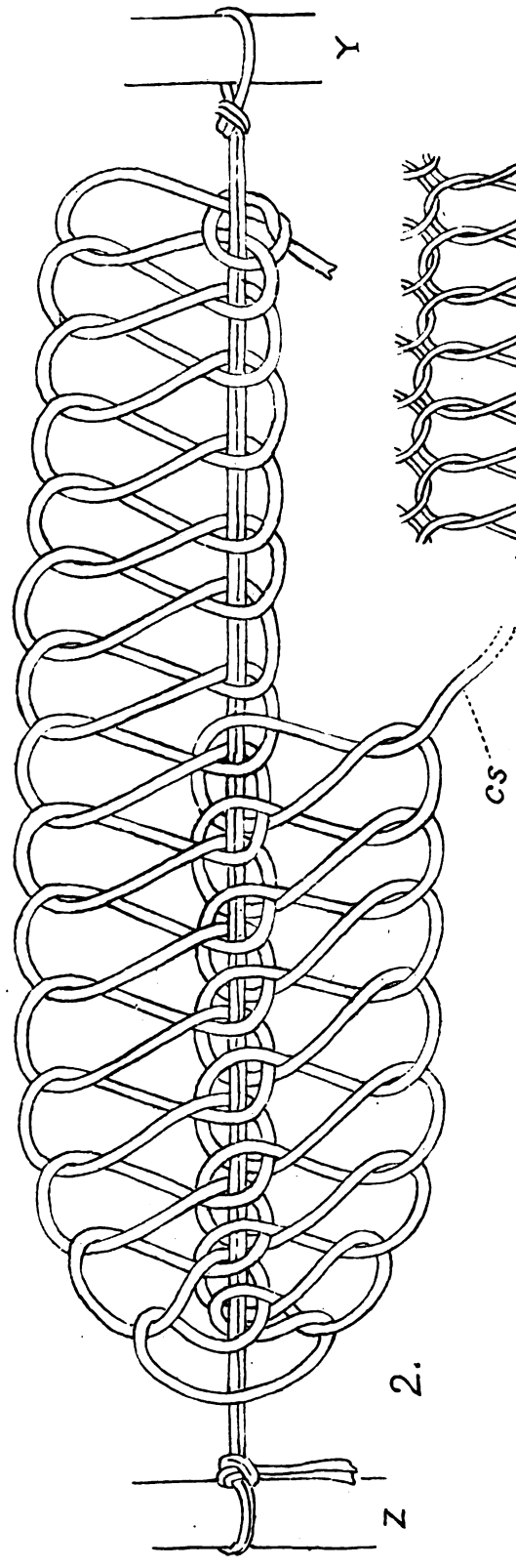
W.E. Roth. del.

Plate IX. Basketry, &c.—Made with one continuous strand: basal strand straight: loop-and-twist pattern.

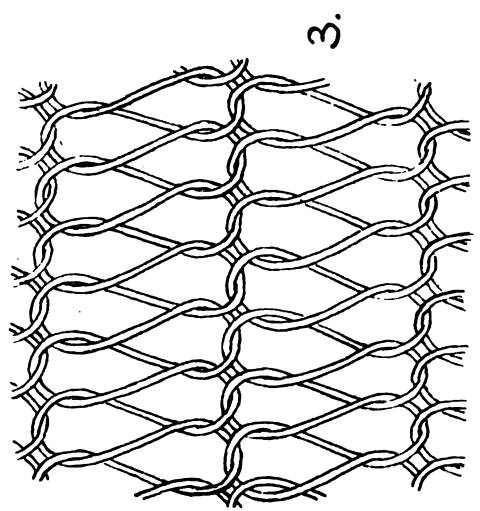
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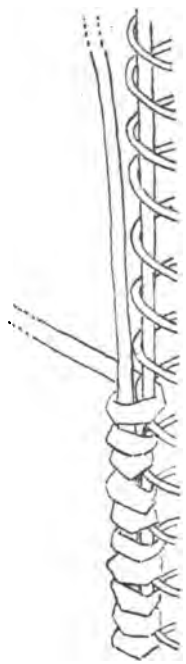
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 Plate X. Basketry, &c.—Made with one continuous strand : basal strand straight : hour-glass double-loop pattern.

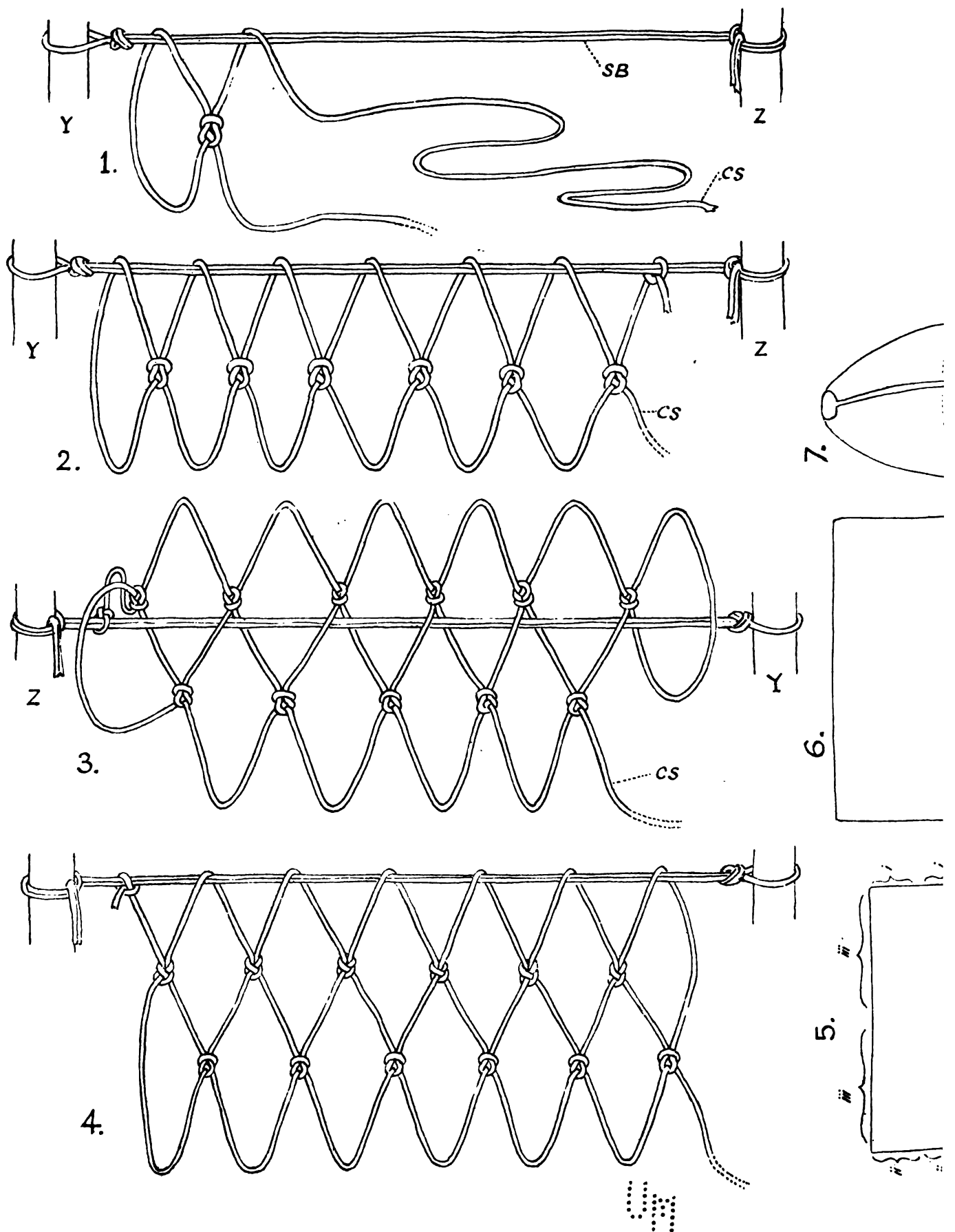
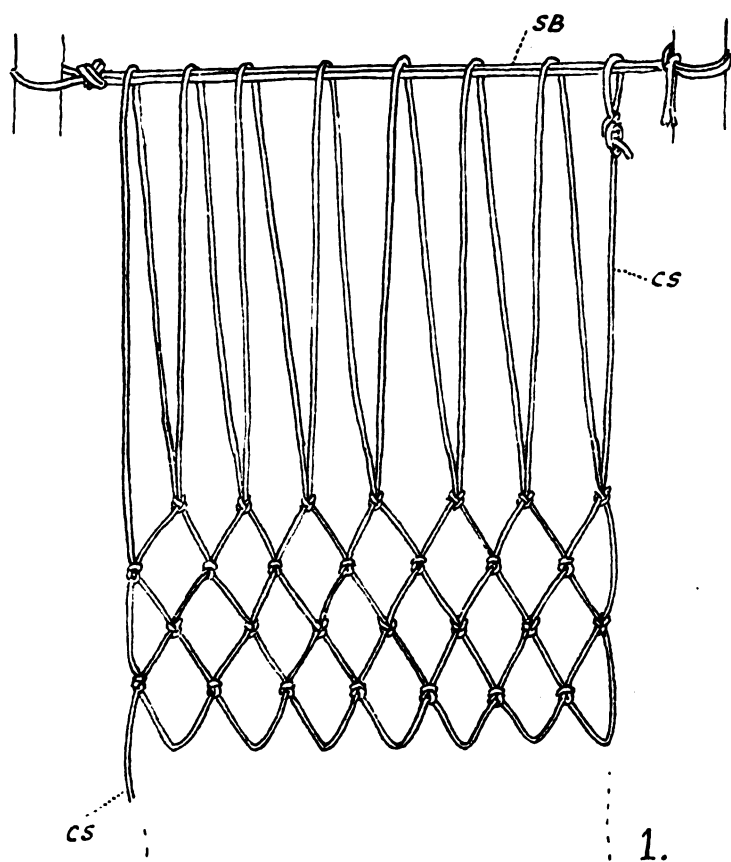
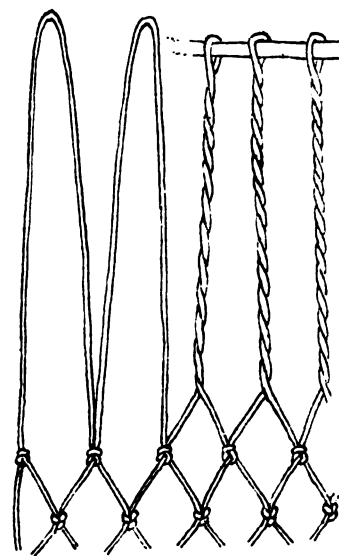


Plate XI. Basketry, &c.—Made with one continuous strand: basal strand, straight: netting-stitch pattern.

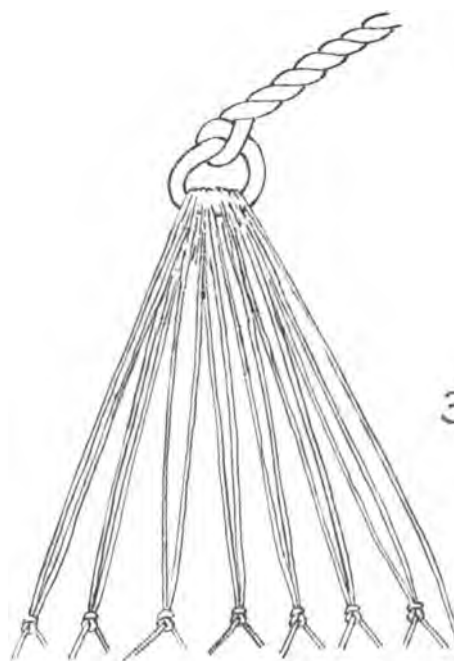
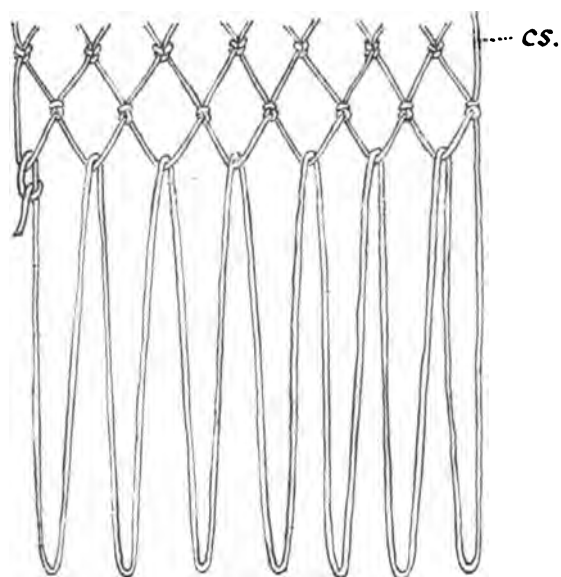
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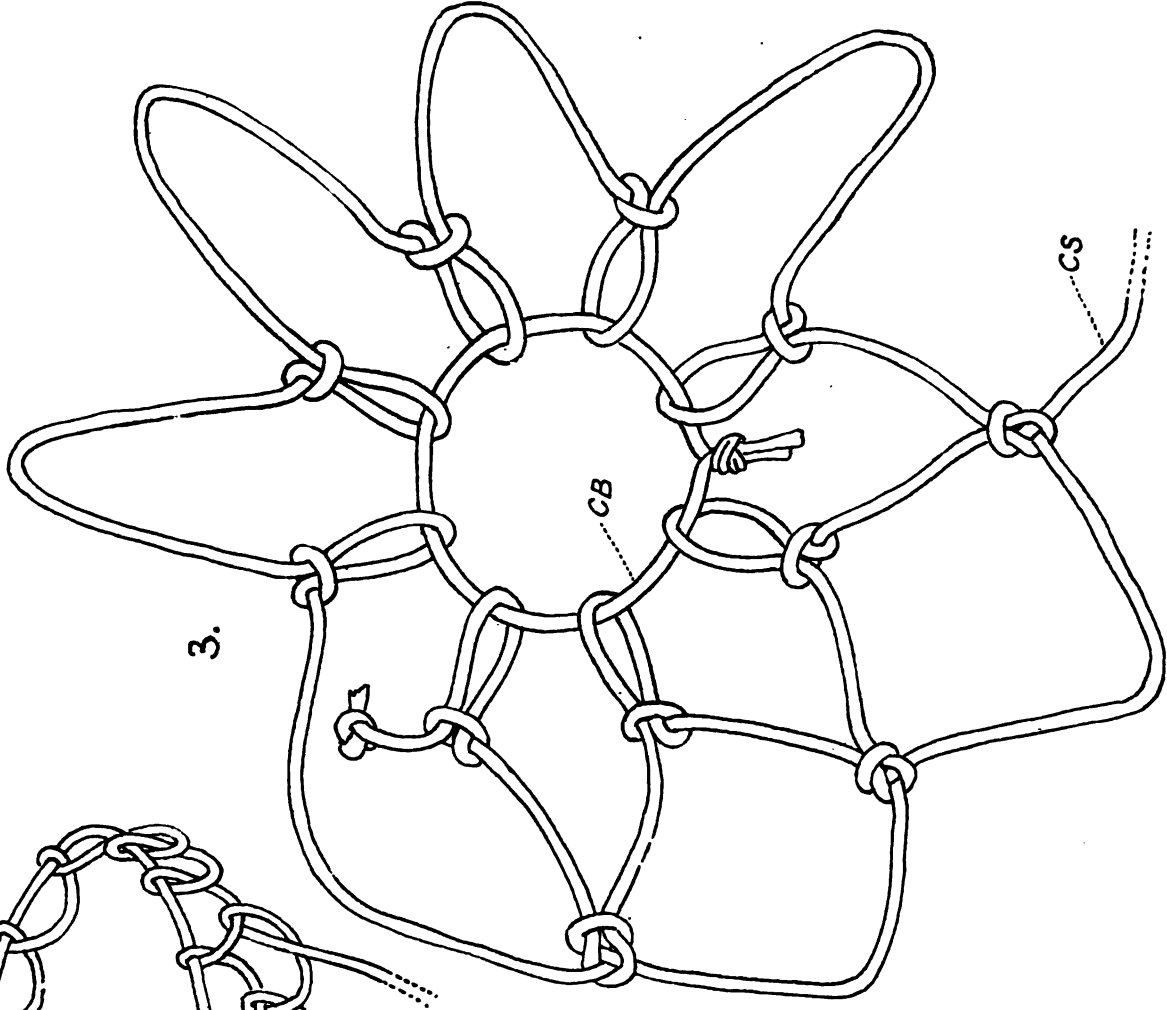
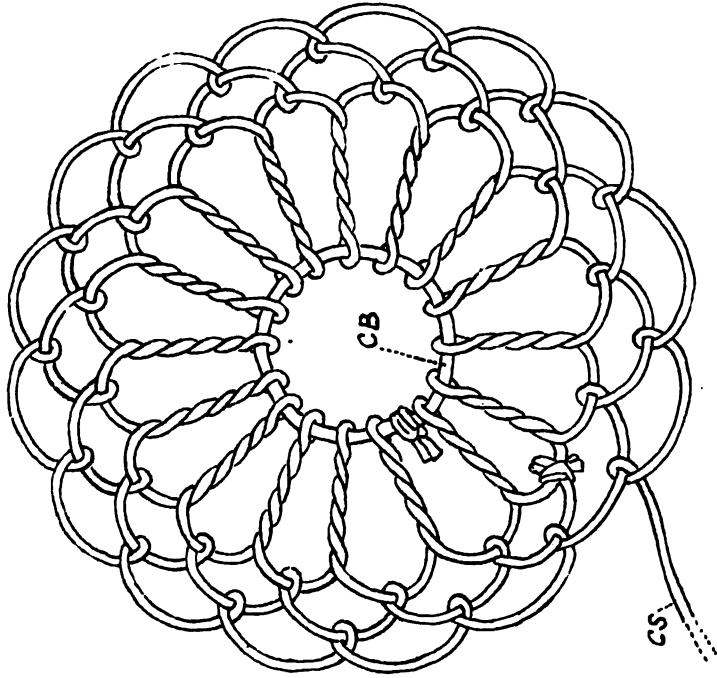
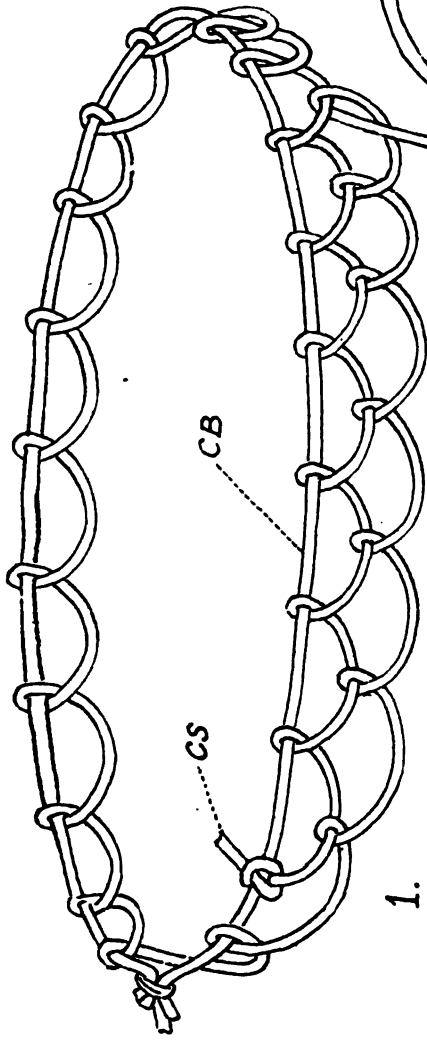


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W.E. Roth. del.







W.E. Roth. del.

Plate XIII. Basketry, &c.—Made with one continuous strand: basal strand, circular: simple-loop and netting-stitch Patterns.

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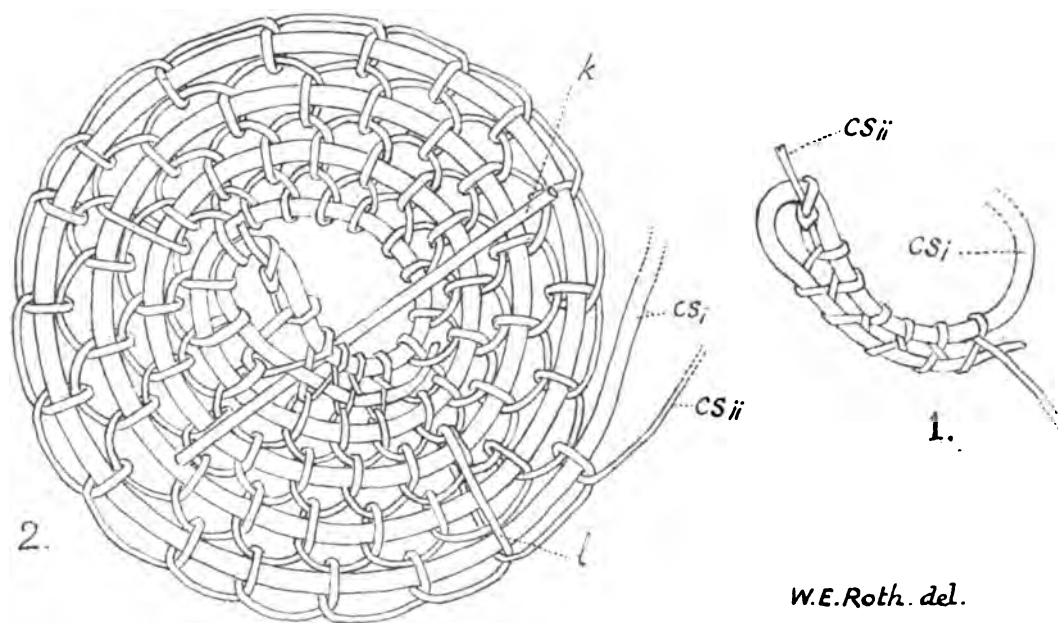
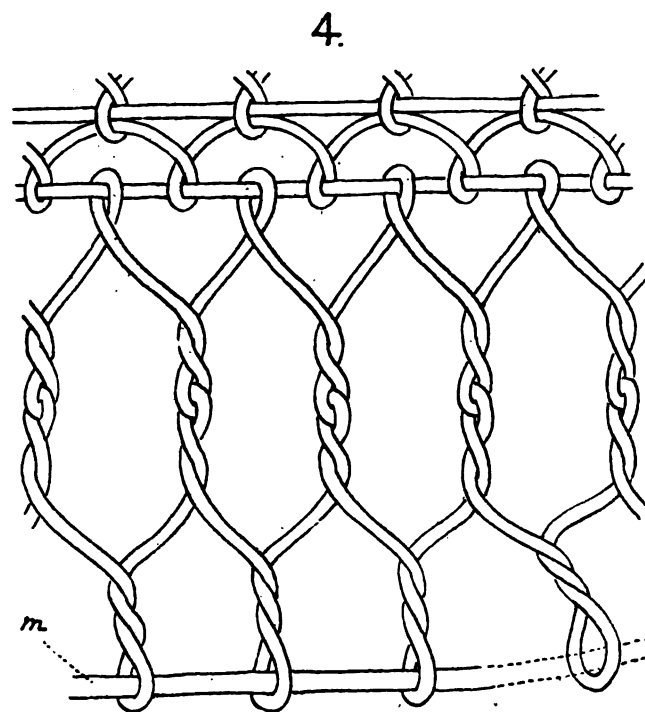
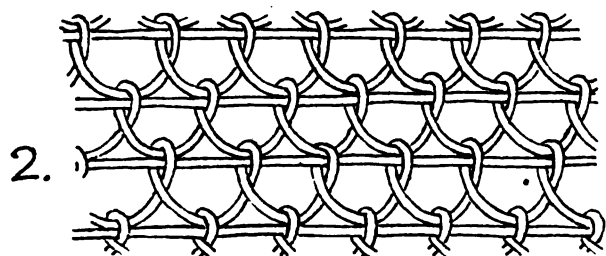
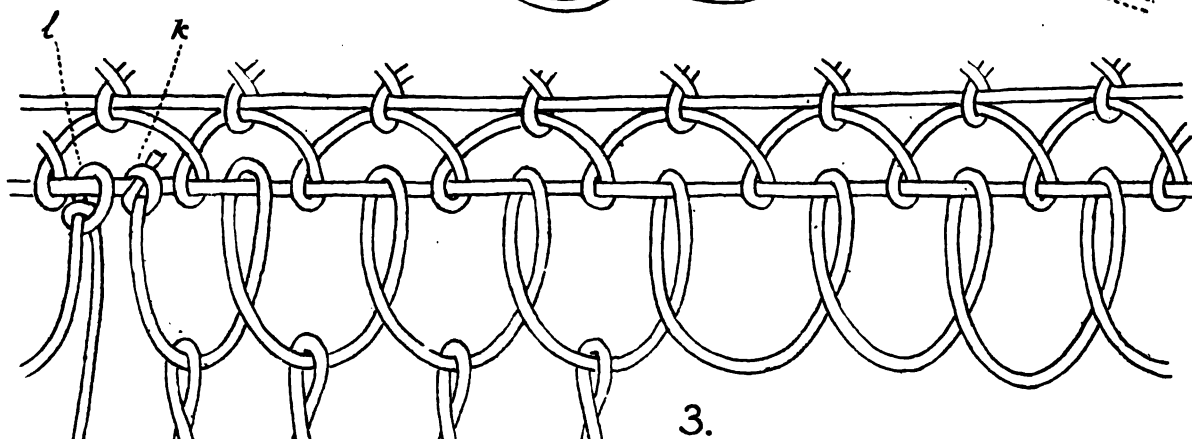
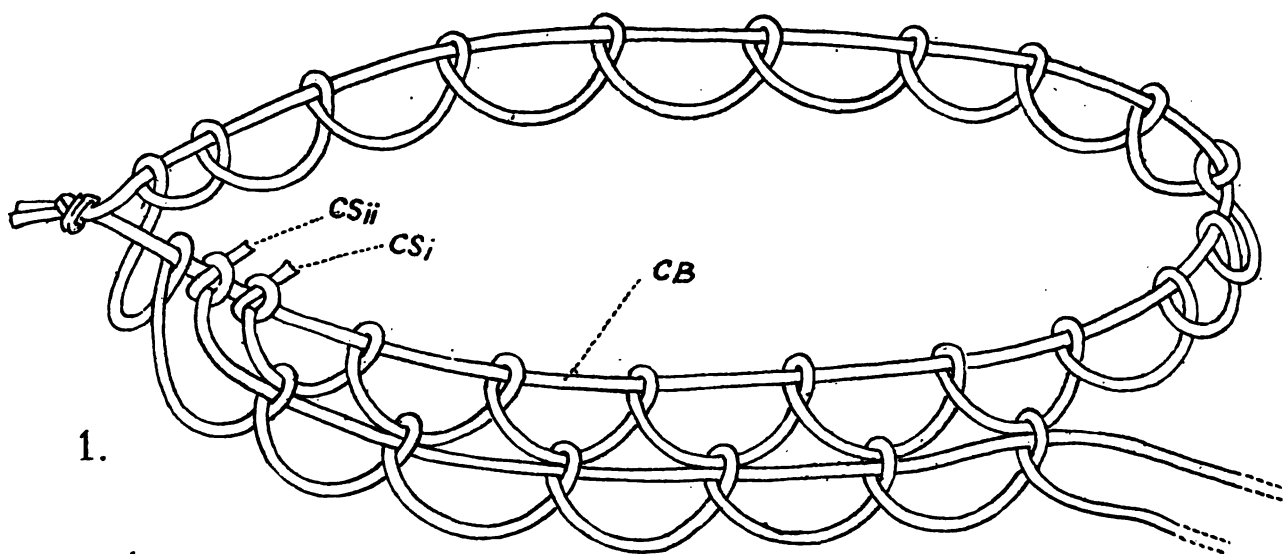


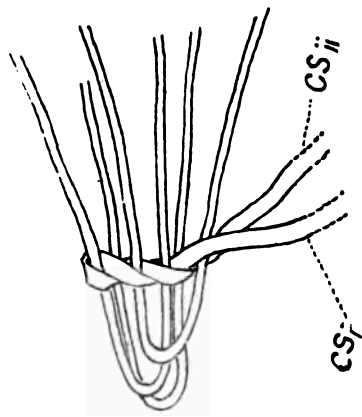
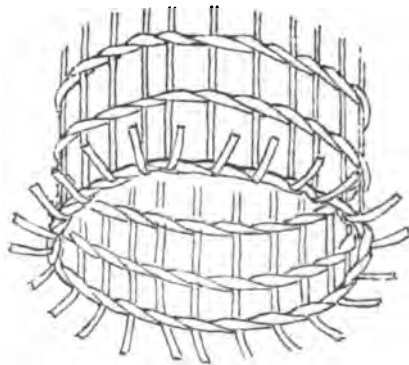
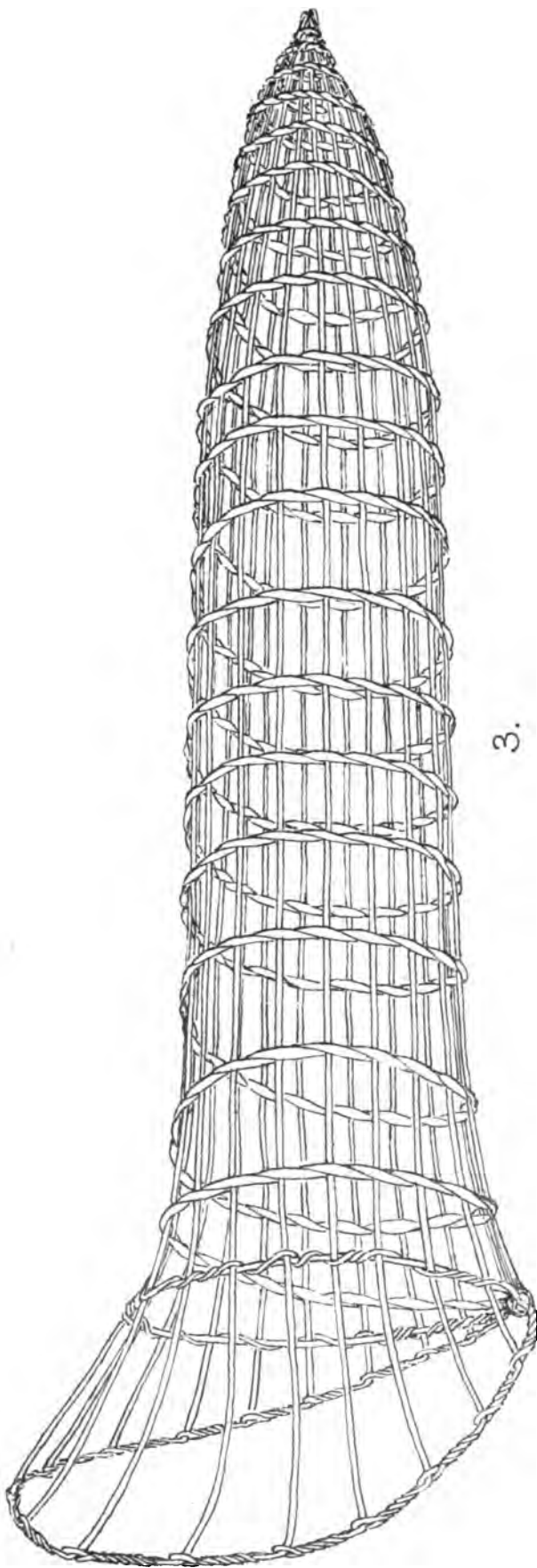
Plate XIV. Basketry, &c.—Made with two continuous strands: no basal strand.



W.E.Roth. del.

Plate XV. Basketry, &c.—Made with two continuous strands: one basal strand, circular.





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W.E.Roth. del.

Plate XVII. Basketry, &c.—Manufacture of Wallaby and Fish Traps.

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1901.
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QUEENSLAND.

HOME SECRETARY'S DEPARTMENT, BRISBANE.

NORTH QUEENSLAND ETHNOGRAPHY:
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APRIL, 1901.

THE STRUCTURE OF THE KOKO-YIMIDIR.
LANGUAGE.

BY

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WITH THE ASSISTANCE OF
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Lutheran Missionaries at Cape Bedford Mission Station.

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND.

BRISBANE:
BY AUTHORITY: EDMUND GREGORY, GOVERNMENT PRINTER, WILLIAM STREET.

1901.

C. A. 22-1901.

PREFACE.

I HAVE drawn up this report on the lines which were followed in my grammar of the Pitta-Pitta language, as published in the "Ethnological Studies among the North-West-Central Queensland Aborigines."

I purposely wish to give publicity to the assistance which has been invariably rendered me by the Revs. G. H. Schwarz and W. Poland during its compilation. Especially without the former's help I should never have discovered the various compounds derived from their simpler roots, nor the meanings of the many inflections assumed by words, nor the why and wherefore of many a point which at first seemed inexplicable to me. That there is something more in an aboriginal language than would appear to the superficial observer may be gauged from the fact that, though Mr. Schwarz has been living practically alone with these blacks for the last thirteen years, he, nevertheless, recognises that there is still much for him to learn.

It is noteworthy that this Koko-Yimdir language is the identical one of which Lieutenant Cook took a vocabulary (Sect. 2 e) when visiting the Endeavour River in 1770.

The spelling of all native words is based on that laid down in the circular of the Royal Geographical Society of London, on the "Orthography of Geographical Names" (revised up to May, 1894).

WALTER E. ROTH.

Cooktown, 1st April, 1901.

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THE STRUCTURE OF THE KOKO-YIMIDIR LANGUAGE.

1. The Koko-Yimidir language is spoken along the coast-line extending from the Annan and Endeavour Rivers to the northern side of Cape Flattery, although it is understood considerably beyond these limits. Owing mainly to their comparative isolation, the blacks at Cape Bedford would appear to speak it in its full purity. Koko = speech, yimidir = the same, similar.

To the north, the next distinct language is Koko-negó-di, spoken from Barrow Point to Cape Melville. Nego = there, di = with, ga-yi = the negative, etc., these three words in Koko-yimidir being nai-yun, dir or chir, etc., and ga-ri respectively. The Koko-negodi language has no r in it, which thus renders the speech comparatively soft. Koko-jombol and Koko-yimpol, spoken by the few coastal blacks between Cape Flattery and the mouth of the Starcke River, and between this river and Barrow Point, respectively, would seem to be dialects or corruptions of Koko-yimidir.

To the south, the next distinct language is Koko-piddaji. Piddaji = a term employed in the sense of pity and compassion, one that would correspond to our expression of "Poor devil!" the blacks speaking this language being the weakest and most often imposed upon of any in the Bloomfield district. The land which these aborigines occupy at the mouth of the Bloomfield River is known as Bannabilla (Banna = water), a word which has been corrupted by the white settlers into "Banana Billy" when speaking of any of them. Between the Koko-yimidir-speaking blacks of the Annan River, and the Koko-piddaji of the Bloomfield, the coastal blacks around Mount Amos used to talk Koko-baldja (baldja = abrupt), but this is now a lost language.—(R Hislop.)

2. The Naming of Things in General.—In analysing the vocabulary of between eight and nine hundred distinct Koko-Yimidir words, my attention has been drawn to four particular groups of names; these are (a) generic terms, (b) objects named after their attributes and appearances, (c) manufactured articles described according to the material of their construction, and (d) names of things introduced with advancing settlement and civilisation. (e) Shows a comparison of present-day names with those obtained by Lieutenant Cook in 1770.

(a) *Generic Terms.*—There are about a score of these words.

daku	= anything in general (animate or inanimate).	kuyu, kutchu	= any and every fish.
katil }	= { name of anything (person or thing).	mayi	= " " " edible plant, as opposed to
puri }		mina	= " " " edible animal.
dingkan	= any and every insect.	milka-barancha	= " " " fern.
dir-tchir	= " " " bird.	munu	= " " " grass.
dunggul	= " " " snake.	nambal	= " " " stone.
durbu	= " " " young shoot (plant).	por-nga	= " " " undergrowth (bushes).
ganggal	= " " " child.	yambun	= " " " animal's
kaka	= " " " sickness, illness.	yoku	= " " " young (pup, chicken, etc.)
kalka	= " " " spear.		

(b) *Names Indicative of Attributes and Appearances.*—Amongst many such may be mentioned the following:—

burn-ga (kangaroo-pouch)	= (fibre-thread) dilly-bag.	kuman (leg)	= tree root.
magar (cob-web)	= fish-net.	wanggar (the button-orchid)	= grass-bugle necklace.
milka (ear)	= a loop in a piece of string.	kambul (belly)	= green ant's nest.
belu-warra (hip-crooked)	= pelican.	ngamu-ngartchar (mother-fright)	= dingo (i.e. the one who has Fright for a mother, the son of a coward).
gulgi (finger or toe-nail)	= native chisel.		

The following four names of birds are certainly *onomatopæic*:—

duku-duku	= brown dove (<i>Geopelia humeralis</i>).
da-ka-o	= leather-head (<i>Philemon corniculatus</i>).
bir-bir	= parrakeet (<i>Psephotus pulcherrimus</i>).
go-ga	= laughing jackass (<i>Dacelo gigas</i>).

(c) *Names Descriptive of Material of Construction.*—We have similar things in English, speaking as we do of "a copper," a "pewter," "the irons," etc.:—

baitchin	= <i>Spinifex hirsutis</i> = mop, sponge, etc., made from it.
dirnbur	= <i>Imperata arundinacea</i> = dilly-bag made from it.
gambar	= <i>Erythrophloeum Labouchei</i> = gum-cement made from it.
gurlnggo	= species of Box-wood = bark trough made from it.
do-war	= species of Black Palm = spear made from it.
(w)o-yur	= <i>Acacia holocarpa</i> = spear made from it.
milbar	= <i>Nautilus</i> = shell-ornament made from it.
mirrimbal	= cockatoo top-knot = head-ornament made from it.
monggan	= <i>Pandanus</i> sp. = armlet made from it.
dirkai	= <i>Melo diadema</i> = shell-boiler made from it.
mai-al	= species of gourd-bearing vine = water-vessel made from it.
yirmbal	= species of large shark = Rain-bow (which is supposed to represent the animal's excrement in course of ejection).

(d) *Names of Introduced Articles.*—These constitute a very interesting series:—

ngaran	= dorsal spines of a fish = wire nails.
wanggar	= button-orchid = beads.
dunggalu	= oval depression made in the mud by a stingaree = basin, saucer, cup.
bodu	= Melaleuca (Tea-tree) bark = blanket.
kanan	= scratch, mark, cat's-cradle, etc. = writing, a letter.
bor	= dried grass = tea.
murla	= honey = sugar.
ngalkai	= smoke = tobacco.
babbal	= buttock = loaf of bread.
mulir-godera	= tooth-two = scissors.
beda	= species of shell with ground-down edge which used to be employed for cutting = knife.
yulal	= any flat piece of wood = a plank, (and so,) ship, boat.
gumbo-balkal	= urine-to make = cockroach (from the smell).
yoku	= tree = horn of a bullock.
walu-yokir-dir	= temples-horn-with = bullock.
ngaku-ganggal	= shoulder-child = (a child on the shoulders, pickaback), a horse.
mayi-durlar	= food-to wash = pig (in view of the animal digging its snout into the slush and slime).

[Note: Among the Mallanpara blacks of the Lower Tully River, so far as animals only are concerned, anything big, large, etc.—anything out of the common—with each kind of animal, is spoken of by a different name, e.g.:—

	Ordinary Size.	Extra Large, Big, etc.		Ordinary Size.	Extra Large, Big, etc.
eel	chaban	kuniji, chalkai-jinji	turtle	bachigal	chokola
black-bream	bukal	chalkai-yalma	cassowary	kondoi	chalkai-nyito
black-snake	ngortan	chalkai-puyu	wallaby	baragan	chalkai-ulnkala
carpet-snake	kundai-a	chinna-munggun	dingo	kanipara	chalkai-chilkarin
iguana	chakai	chalkai-batanga			

The term chalkai is a word applied to anything big, and so, old, and thus comes to be referred to a bald person. Nothing like this, however, is met with in Koko-yimidir. In English, the only case I can call to mind is that of man and giant.]

(e) *In comparison with Lieutenant Cook's vocabulary*, collected in 1770, the following names will doubtless prove of great interest, nearly all being recognisable. I have taken the text, with its spelling, from Hawkesworth's Edition of the Voyages, published in London, 1773, vol. iii., pp. 242-3.—

	Cook's Name.	Present-day Name.
Head	... wageegee	... kambogo. [Cook's name is probably a corruption of bai-tchir-tchir = to cover.]
Hair	... morye	... moari. [The Koko-negodi term is mo-yi.]
Eyes	... meul	... mil.
Ears	... melea	... milka.
Lips	... yembe	... yirmbi.
Nose	... bonjoo	... bunu.
Tongue	... unjar	... ngandar.
Beard	... wallar	... walar.
Neck	... doomboo	... dumu (= chest).
Nipples	... cayo	... guyu (= breast, milk).
Hands	... marigal	... mangal.
Thighs	... coman	... kuman.
Navel	... toolpoor	... dorlbor.
Knees	... pongo	... bunggo.
Feet	... edamal	... tana.
Heel	... kniorror	... nuro.
Cockatoo	... wanda	... wandar.
Sole of foot	... chumal	... jammal (= foot and smaller toes, on Annan River and Mount Cook).
Ankle	... chongurn	... chunggan (on the Annan River and Mount Cook).
Nails	... kulke	... gulgi.
Sun	... gallan	... ngalan.
Fire	... meanang	... mintchil (= hot).
A stone	... walba	... nambal (= any and every stone).
Sand	... yowall	... yual (= beach).
A rope	... gurka	... gurka.
A man	... bama	... bama.
A male turtle	... poinga	... bornda.
A female	... mameingo	... mami-ngu.
A canoe	... marigan	... maragan (on the Annan River and Mount Cook).
To paddle	... pelenyo	... birli (pres.), birli-nu (fut.).
Sit down	... takai	... dakaya.
Smooth	... mier carrar	... moimon.
Dog	... cotta, or kota	... goda.
Pole-cat	... quoll	... dekol (= <i>Dasyurus</i> sp.)
Loriquet	... perpere, or pier-pier	... birbir.
Blood	... garmbe	... garnbi.

	Cook's Name.		Present-day Name.	
Wood	...	yocou	...	yoku.
Bone Nose-pin	...	tapool	...	tabul.
A bag	...	charngala	...	dan-gara (= parcel rolled up in tea-tree bark).
Arms	...	aco, or acol	...	ngaku = shoulder. ngakul = arm.
Thumb	...	eboorbalga	...	none: probably = yerba balka—i.e., "Thus make!" "Do like this!" etc., the action of the questioner, in pointing the thumb to arrive at its name, being misinterpreted by the savage.
Fore, Middle, and Ring Fingers	...	egalbaiga	...	none: probably = galbai-go—i.e., long, etc.
Little finger	...	nakil, or eboor-nakil	...	ngakin [eboor = yerba, see <i>ante</i>].
Sky	...	kere, kearre	...	tjiri.
A father	...	dunjo	...	peba [dumo = term applied by a man to express his sister's husband].
A son	...	jumurre	...	yumur = son (when addressed by his father).
A great cockle	...	moingo.	...	mon-ji (= large sp. of clam).
Cocos, yams	...	maracotu	...	diremandi (= Cocos nucifera).

[Note: Under date 28th June, 1770, Captain Cook states "and the upper lip and breast of one of them was painted with streaks of white which he called *carbunda*": evidently the modern *kanan-da*—i.e. marks-with. Again, under date 14th June "this animal . . . called by the natives *kangaroo*": this marsupial is still spoken of as *ganguru*. Elsewhere, the navigator speaks of *yarcaw* and *tut, tut, tut*, etc., as supposed expressions of admiration: the former is the modern *yir-ké*, a note of exclamation indicative of surprise, while the latter is still used as exclamatory of swift motion, e.g. a fish shooting along in the water.]

3. Nouns: Names of Parts of the Human Body.

kambogo = head.

k.-gulnggul (heavy in weight) = stupid.

k.-dallel (light in weight) } = sensible.

k.-budar " " }

[Note: The parallel expressions "wooden-headed," "block-head," "clear-headed," etc. We speak of "light-headed" in the opposite sense to that applied to it by these aboriginals.]

walu = temple, side of face [appearance, similar, like]. From the meaning of "side of face," it comes to be used in a prepositional form, indicative of "on this side of," "on other side of," etc. *Of.* wala = wide.

w.-dindal (to bite) = headache.

w.-budon (sign of added emphasis, etc.) = the very appearance, the correct thing.

w.-yendu (another) = different.

w.-gulboigo (together) = equal in appearance, and so, similarity.

w.-yoku (horn) -dir (with) = bullock.

moari = hair of scalp.

m.-ngalan (sun) = red-haired.

[Note: We express a woman's golden looks as "sunny ringlets."]

ping-a = grey-hair.

be-bar = brain.

bir-di = fore-head.

nirnga = eye-brows.

mil = eye. [The kernel of a nut, e.g. *Cycas*].

m.-ngalbur (to shut in) = to close the eye.

m.-yandal (to stand up) = to open the eye.

m.-waril (to fly) = mad, drunk.

m.-ngamba (closed) = won't see, careless.

m.-dambanbar (to throw) = to throw the fish-lens in the sand for others to find, the hide-and-seek game.

m.-badibe (bone) = sharp-eyed, keen-sighted, good long-distance vision.

m.-beyal (sinew, tendon) = to stare at, give close attention to.

m.-boka (backside) = anus.

[Note: The word "eye-let" in the sense of a small hole.]

m.-kuru (?) = a smouldering ember.

millbal = a tear, weeping.

bunu = nose. [The beak or bill of a bird, snout of a fish, crocodile, etc.]

b.-beyal (sinew, etc.) = determined, mean, selfish.

b.-diar (hole) = nostril.

[Compare "thyrel" (Old English = hole); nose-thyral, -thrill, thirl, and so "nos-tril."]

yirmbi = lip. [The edge of the mouth of dilly-bags, edge of the leaf-scale trough, etc., similarly applied by us.]

[Compare yirubar = the two boards fixed on the top edges of the canoe, yirpi = a tassel on the apron belt, and yirmba = bitter to the taste.]

barkar = mouth. [Mouth of a dilly-bag, the door of a hut, etc., *cf.* our "mouth of a cave."]

b.-kada (foul) = foul-mouthed, obscene.

b.-warra (bad, "cronk," etc.) -mal (to become) = to crave for food, food-sick.

wau-wu = breath, the "soul." [The inside of anything, e.g. dilly-bag, hut, etc.]

w.-wointchor [a verb used only with wau-wu in the sense of movement] = a gust of wind.

w.-dir (with) = with all my "heart," hope-fully.

w.-kulbalbal (?) = to sigh.

w.-mul (without) = lost heart, despair.

w.-bieni (to die) = tired, thirsty.

ngandar = tongue.

n.-matchul (soft to the touch) = to mumble, babble.

[Note: We speak of a "soft-tongued" individual in different sense.]

mulir = tooth.

m.-badibe (bone) = to crunch, growl.

m.-budon (sign of added emphasis) = sharp-edged.

m.-godera (two) = scissors.

walar = beard. [The antennæ of a crayfish, the strands forming the warp of the grass dilly-bags.]

[Note: There is no separate word for moustache.]

ba-ri = chin (*cf.* ban-tebir = hard to the touch).

numbol = cheek.

n.-pudal (to eat) = to kiss.

n.-muru (short, round) = chubby, robust.

[Note: Our expression of "round cheeks" in the sense of fatness, chubbiness, is identical.]

milka = ear. [A loop in a piece of string.]

[Note: It must be premised that this organ is believed to be the seat of intelligence through, or by means of which, the impressions from the outer world, etc., are conveyed to the inner. Compare "He that hath ears to hear, let him hear," etc., used as a prefix to any important statement in the Scriptures.]

m.-mul (without) = stupid.

milka—continued :

- m.-dir (with) = intelligent, obedient. [Compare our "pricking up its ears."]
 m.-ugamba (closed) = won't hear, obstinate.
 m.-warra (bad, cronk, etc.) -mal (to become) = to crave for home, home-sick.
 m.-n (euphonic) -yiwara (to look for, but not necessarily to find) = to forget.
 m.-dundal (to often) = home-sick.
 m.-ngandal (to refuse) = to forget.
 m.-mamalma (to see) = to remember, hear, think.
 m.-ninggal (to sit) = to listen.
 m.-bakul (to dig) = to persuade. [Compare our expression "to drum into one's ears."]
 m.-bantchir (hard) = obstinate, mad.
 m.-ngudo-ngudo (a reduplicated form of play, recreation) = "mind" set on playing, i.e. playful.
 m.-bandandaya (to break open) = ears closed before, opened now, i.e. to turn over a new leaf, to amend.
 m.-barantcha (cf. baral = an edible fern) = any fern. Curled frond is comparable to an "ear."

dur-chur = back of the neck.

manu = throat, whence the voice proceeds.

m.-ngudo (play, recreation) = playing with the voice, to joke.

[Note: Our expression "to play with one's words."]

m.-budon (sign of added emphasis, etc.) = the throat with its voice alone, and nothing else, i.e. the truth, and so "of course," "certainly."

m.-nuyal (to accuse) = to deny.

ngaku = shoulder [cf. ngakul = arm.]

n-ganggal (child) = child-on-shoulder, pick-a-back, and so, a horse.

gamur = arm-pit. [Fin of a fish.]

dumu = chest.

d.-wamil (to see closely) = to meet, come close to, one another.

guyu = breast. [Milk.]

g.-mil (eye) = nipple.

borgul = heart.

go-ro-gol = kidney.

mamba = fat (solid).

milkol = fat (fluid), i.e. oil.

diba = liver.

kambul = belly. [A green-ant's nest.]

k.-bokol (ant-hill) = pot-bellied.

k.-warra (bad, cronk, etc.) -mal (becomes) = angered, offended.

[Note: In English, "to stick in one's gizzard"; in Latin, "stomachos," signifying wrath, and "stomachari," to be angry.]

k.-mandai (filled) = belly-full, satisfied.

[Note: "Mandai," as a word by itself is not used in the Koko-yimdir language; it appears to be a Koko-nigodi word.]

k.-dargaren (swollen) = satisfied.

k.-danggur (to scratch) = labour-pains.

baru = lap.

b.-ngondu (hither) = front hither, i.e. towards me.

b.-dibar (south), etc. = lap to south, i.e. going southwards.

dorlbor = umbilicus.

mo-chirl = umbilical cord.

no-nol = flark.

mo-ku = dorsum, back-bone. [Keel of a boat, bottom of leaf-scale and bark troughs, web of grass dilly-bags, the belt-portion of an apron-belt, mid-rib of a leaf, fruit and seed of a plant, roof and walls of a hut, the "shell" of turtles, molluscs, crabs, lobsters.]

mo-ku—continued :

m.-bantchir (hard) = strong.

m.-burna (?—) = a ribbed-shell edible-mollusc.

m.-nurnbu (?—) = diligent.

ngakul = arm, i.e. from shoulder to elbow, though it also may express, as in English, the upper extremity as a whole, as compared with the leg as a whole. Cf. ngaku = shoulder.

[The bough of a tree, insect's legs, a centipede's legs, the claws (only) of crabs and lobsters.]

n.-yoku (tree) = arm like a tree, i.e. strong-limbed, powerful.

yurln-gal = elbow.

marda = fore-arm (cf. mara = wing).

mangal = hand, fight. [Compare "fist" and "fight."]

(a) In the sense of "hand."

m.-goma (together) = fist.

m.-gowara (?—) = thief.

m.-kambul (belly) = palm of hand.

m.-moku (dorsum) = back "

m.-muru (short) = close-fisted, mean.

m.-daimbur (loose in the sense of skin) = open-handed, generous.

m.-gulnggul (heavy) = clumsy.

m.-gulor (?—, but cf. gala = fork) = fingers.

m.-kadara (to come) = to beg, ask for.

m.-dumbil (to break) = to prevent, hinder.

m.-bakal (to dig) = to "

m.-karpal (to touch) = to take by the "hand, to lead.

[Note: The expression "yi-e unana mangal," i.e. here lies the-hand = here it (anything) is!]

(b) In the sense of "fight."

m.-ga (for the purpose of) = war.

m.-be (in) = in the fight.

ngakin = little finger, little toe.

daku = left hand or foot (not position).

d.-dir (with) = left-handed.

d.-pinal (clever) = equally clever with left hand as the right, hence skilful at anything, good all round.

d.-gulnggul (heavy) = clumsy: "all thumbs."

d.-dallel (light) = handy, deft [cf. our "light-fingered"].

malla-budon = right hand or foot (not position).

m.-tchir = right-handed.

ganguru = thumb, big toe. [Kangaroo: cf. its long toe.]

gala = fork of legs, fingers, etc. [Fork of tree.]

g.-galbai (long) = fork spread out, a long stretch, far off.

babbal = buttock. [Loaf of bread.]

boka = backside (both buttocks together).

golon = penis.

[Note: The expression "derri-melli golon dambar," i.e. Thunder (his) penis throws-down = lightning.]

dilbar = testicles.

tinnal = vulva.

belu = hip.

b.-warra (bad, crooked) = pelican.

b.-mayar (?—) = widow.

kuman = thigh, whole leg. [Insects' legs. Tree roots.]

k.-yoku (tree) = strong as a tree, strong-limbed, powerful.

bung-go = knee.

be-bar = shin.

ngari = calf.

ngada = hollow space at back of knee.

n.-galbaigo (long) = limb extended, no "hollow" there (like a bent leg), i.e. a bee-line.

noggal = ankle.
 tamal = foot, tracks, foot-prints.
 t.-moku (dorsum) = instep.
 t.-kambul (belly) = sole.
 t.-pinda (branch) = toes.
 t.-gulor = toes, *c.f.* mangal-gulor.
 t.-nobun (one) = one-footed, a name applied to a local mountain rising sheer vertically from the surrounding plain.
 nuro = heel.
 murba = big-toe.
 ganguru = big-toe, thumb. [Kangaroo. *Cf.* its long toe.]
 gulgi = nail, claw. [Chisel or gouge for cutting a canoe.]
 badibe = bone.
 yirmbar = rib.
 numba = spittle, sputum.
 beyal = tendon, sinew.

ngara = skin [Bark of a tree]. [*c.f.* nganka = feather, ngaran = dorsal spines of a fish, ngeren = legs (not claws) of crabs and lobsters, ngari = calf, ngada = popliteal space.]
 n.-dindal (to hit, bite) = to hunt away.
 munon = skin when peeling off, snakes' scales.
 garn-bi = blood.
 g.-n (euphonic) -dindal (to bite) = inflammation.
 banggar = human flesh. [In animals it means flesh without bones, in contradistinction to mi-na, flesh with bones.]
 dol = bowels.
 mang-ga = excrement.
 m.-doril (to eject) = to defæcate.
 gumbo = urine.
 g.-balkal (to make, imitate) = a cockroach (in resemblance to the smell).

4. Nouns: Names of the Human Body as a Whole.

dodi = corpse, body. [Body of insect, crab, lobster.]
 duyū = corpse, death.
 d.-ngu (for the purpose of) kundan-dal (to strike) = to kill.
 ganggal = child.
 g.-tchir (with) = pregnant.
 g.-doril (to eject) = to be confined.
 g.-danggur (to scratch, etc.) = labour-pains.
 diran = boy.
 yerka = an older boy. [Sign of male sex.]
 bama = adult man.
 b.dalmbakabal (to throw down) -baya (each other) = to wrestle.
 dirainggur = old man.

waral = girl. [Sign of female sex.]
 kabir = an older girl. [Sign of female sex.]
 kabir-kabir = the girls, the Pleiades.
 ngando = adult woman.
 kamba kamba = old woman.
 wangar = white man.
 malul = white man, devil, etc.
 dambun = any old man who kills by witchcraft.
 d.-dakaya (to lie down) = to crouch, ready to sneak onto something.
 won-dor = a person not yet physically dead, but "doomed."
 wu-tchi = "ghost" -with, *i.e.* one possessed.

5. Nouns: Names of Objective and Subjective Sensations, etc.

yinil = cowardice, coward.
 y.-gural (to make) = to frighten.
 kuli = anger, angry.
 k.-malmal (to be, become) = to hate.
 k.-kuli (*i.e.* reduplicated) = wild, savage. [A crocodile.]
 ngar-tchar = fright.
 dudor = quiet.
 yerbaigo = willingly, freely, for nothing in return.
 dingga = hunger.
 d.-dir (with) = hungry.
 d.-puli (fallen down) = hungry.
 gilgi = jealousy.
 dulmbil = seriousness, sadness, sad.
 karbun = happy (but never used as a word by itself).
 k.-malmal (to be, become) = to be pleased, glad
 koko = speech, voice.
 k.-mul (without) = silence.
 k.-balkalkal (to make) = to ask.
 k.-yimidir (similar) = dialect, language.
 ungga = a crying, weeping. [Any animal's "call."]
 detchul = a laugh, smile.
 wau-wu = (the breath, the inside, and so, the) "soul."
 wanggo = sleep.
 w.-pulelil (to fall down) = to fall asleep.
 mala = a convicted person, and so a guilty one.
 wanga wanga = lie, liar.
 goimbur = a whistle.

tabul = the laying on of the "tabu."
 dai-tchen = the taking-off of the "tabu."
 dau-un = friend, friendly.
 pinal = intelligence, clever.
 p.-gural (to make) = to teach.
 daku = anything, animate or inanimate.
 katil } = name of anything (person or thing).
 puri }
 duyū = death [corpse].
 ngu-yar = a dream.
 n.-kadara (to come) = to dream.
 bindo = health [fresh—as applied to water].
 kaka = sickness [salt, bitter—as applied to water].
 k. is suffixed to the name denoting that portion of the body where the illness is supposed to be.
 ngeki = cough, cold.
 n.-balkalkal (to make) = to cough.
 mur-bun = "ringworm"; any other skin disease.
 ngudo = recreation pastime. This word is not used by itself, but always with certain suffixes: *e.g.* -ngu, -we, -dir.
 mim = a "guess-game."
 gunbo = corroboree, entertainment.
 g.-kundal (to strike) = to sing.
 [Note: The "striking" refers to the music-sticks which accompany the songs.]
 g.-worelil (to play) = to dance.
 ancha = initiation ceremony.
 melbi = news.
 m.-dir (with) = messenger.

6. Nouns: Names of Family Relationships.

These are very complicated, even the male and female parents calling their children by different names. I have tried to make the nomenclature as clear as possible by the following tabular arrangement.

<i>name</i>	<i>used by</i>	<i>to express (his or her)</i>
ya-ba ...	man, woman ...	older brother
gar-ka ...	" "	younger brother
ka-nal ...	" "	older sister
dirnggur ...	" "	younger sister
mogagai ...	" "	mother's elder brother
" ...	" "	father's elder sister
" ...	" "	father's elder brother
" ...	" "	mother's elder sister
" ...	elder brother	brother's son
" ...	elder sister	brother's daughter
" ...	elder brother	sister's son
" ...	elder sister	sister's daughter
" ...	woman	father-in-law
mogur ...	man, woman	mother's younger brother
" ...	younger brother	sister's son
ngamu ...	man, woman	mother
" ...	" "	mother's younger sister
diral ...	husband	wife
" ...	" "	sister-in-law
ga-nil ...	" "	brother-in-law
do-we ...	woman	son
" ...	younger sister	sister's son
" ...	wife	husband's elder brother
duno ...	" "	husband
" ...	" "	husband's younger brother
" ...	man	sister's husband
peba ...	man, woman	father
" ...	" "	father's younger brother
be-mor ...	" "	father's younger sister
" ...	woman	mother-in-law
gammi ...	man, woman	father's father
" ...	" "	mother's mother
" ...	man	mother-in-law's mother's brother
ngadi ...	man, woman	mother's father
babbi ...	" "	father's mother
gammindar ...	man	son's son
" ...	" "	son's daughter
" ...	woman	daughter's son
" ...	" "	daughter's daughter
ngadinil ...	man	daughter's son
" ...	" "	daughter's daughter
" ...	woman	son's son
" ...	" "	son's daughter
yumur ...	man	son
" ...	" "	daughter
" ...	younger brother	brother's son
" ...	" "	brother's daughter
" ...	woman	daughter-in-law
be-ol ...	man	mother-in-law
bi-chir ...	woman	son-in-law
ngadina ...	man	father-in-law
nge-dir-chi ...	" "	daughter-in-law
ngaladin ...	" "	son-in-law
ngudor ...	woman	daughter
" ...	younger brother	sister's daughter
" ...	younger sister	sister's daughter

The following should be noted:—

ngamu = mother, anything big. A shark.

n.-ngartchar (fright) *i.e.* fright is his mother = dingo.

n.-budon = big-very, *i.e.* extraordinarily big.

n.-goraigo (*cf.* goralal = to put together) = plenty. [See warka-ngamu under ideas of quantity.]

peba = father.

= foundation or top-string for dilly-bags.

7. Nouns: Names of Persons.

People are named after animals, parts of the body (*e.g.*, baru = lap), plants (*e.g.*, mulun = quandong), places, after their relations, etc.

Many parallel examples are to be met with in our own language. In the case of animals, we have John Bull, etc.; we speak of young children as "small fry" (*i.e.*, a crowd of young fishes), of a baby as a "piggy-wiggy," of a sturdy youngster as a young "lion," of certain men as sly "dogs," and of a few women as regular "cats." Mr. Hand, Mr. Head, Mr. Foot, etc., are not uncommon. In connection with plants, we have our Rose, Myrtle, etc., and talk of our children collectively as olive-branches. After places, we find people named Wood, Hill, Forest, etc. All our patronymics are of course names of relations.

When on the Endeavour River in 1770, Lieutenant Cook describes the name of one of the natives as Yaparico: this family name still exists, under the guise of Yaborego, and is derived from a particular spot in the neighbourhood of Cape Flattery.

As I shall probably not find an opportunity for recording it elsewhere, I may mention here—in connection with human matters and animal attributes—that when something is lost, and cannot be found, no matter its magnitude or indigestibility, the first question asked by a Koko-yimdir aboriginal is, "Who has eaten it?" This should be compared with our expression, "The cat must have swallowed it," under similar circumstances.

8. Nouns: Names of Animals.

mi-na = all edible animals, as opposed to edible vegetables, the term including both flesh and bone [*cf.* banggar = human flesh].

mina moari-dir (animals, hair-with) = all hairy animals, *i.e.* mammals, etc.

(a) *Mammals*.—All these animals are spoken of as having "arms" and "legs." To suckle = guyu pudaral, *i.e.* milk to-drink.

burn-ga = marsupial pouch. [A fibre-twined dilly-bag.]

burlga-tchir = tail of a kangaroo. (Burlga = sp. of fish, tchir = with.)

ngamu-ngartchar = (his) mother- (is) Fright; *i.e.* the son of a coward, and so = dingo.

goda = dog.

kirbadi = dugong.

balengga = porcupine (*Echidna aculeata*).

yam-bun = young of all animals, and hence = pup, chicken, etc.

It is only used in connection with mankind in the one expression—ngamu yambun-go, *i.e.* mother and child.

golan = opossum (*Trichosurus* sp.)

bowor = wallaby (*Halmaturus stigmaticus*).

ganguru
wo-dol
ga-dar
be-bal } = species of kangaroo (*Macropus*)

gogur = mouse, rat (*Hapalotis* sp.)

de-kol = native cat (*Dasyurus* sp.)

(b) *Birds*.—Birds are spoken of as having "legs" and "feet"; the "beak" or "bill" is called a "nose." A nest is described by the same term as "dried grass."

dir-tchir = any and every bird.

ma-ra = wing.

nganka = feather.

born-da = tail.

kundil = egg.

k.-doril (to eject) = to lay.

mirrimbal = cockatoo's top-knot. [A head-ornament manufactured from this.]

wabul = Torres Strait pigeon (*Myristicivora sphillorrhoea*).

belu-warra = (hip-crooked) pelican (*Pelicanus conspicillatus*).

mondor = giant crane, "Jabiru" (*Xenorhynchus asiaticus*).

gorbal = native-companion (*Antigone australasiana*).

wong-gur-ga = plain-turkey (*Eupodotis australis*).

de-wan = scrub-turkey (*Telegalla Lathamii*).

du-ka = scrub-hen (*Megapodius tumulus*).

do-ngoin-ka = black duck (*Anas superciliosa*).

dobborobon = magpie (*Gymnorhina tibicen*).

wandar = white cockatoo (*Cacatus galerita*).

wada = crow (*Corvus coronoides*).

wandi = large eagle-hawk (*Aquila*? sp.)

kutchal = another large eagle-hawk (*Aquila*? sp.).

gargil = small brown hawk (*Hieracidea orientalis*).

bu-ri-we = emu (*Dromæus Novæ Hollandæ*).

duku duku = brown dove (*Geopelia humeralis*).

da-ka-o = leather-head (*Philemon corniculatus*).

birbir = parrakeet (*Psephotus pulcherrimus*).

go-ga = laughing jackass (*Dacelo gigas*).

(c) *Reptiles*.—The eggs of turtles, crocodiles, etc., are spoken of as birds' eggs: the shell of the turtle, etc., is called the "dorsum, backbone": all reptiles, except, of course, snakes, have "legs" and "arms"; the snout is called a "nose."

dung-gul = any and every snake.

mu-non = snake-scales. [Human skin peeling off.]

kabul = carpet-snake.

monguru = carpet-snake (very large species).

walanggar = death-adder.

dakai = iguana.

go-arka = iguana.

badon = lizard.

goboi = lizard.

gánar = crocodile.

kuli-kuli = crocodile, *i.e.* the wild or savage one. [*See* kuli = anger, angry.]

gar-gur = frog. [*cf.* garbarnbar = to jump over.]

nga-u-ya = turtle (the "green-back" variety).

yerlinga = turtle (the "tortoise-shell" variety).

bornda = male turtle } "green-back" variety.

mami-ngu = female turtle }

num-ba } = species of tortoise.

do-gol }

(d) *Fish*.—The fins of fish are spoken of as "arm-pits," the snout as the "nose."

ku-yu } = any and every fish.
ku-tchu }
pin = fish-scales.
ngaran = dorsal spine. [Introduced wire-nails.]
cf. ngara = skin.
burn-gor = every fish's tail, except a
gur-bil = stingaree-tail. [Lobster-tail.]
dunggalu = shallow circular depression made in the mud by a stingaree [hence applied to European basins, saucers].
cf. dunggo, the base or bottom of a dilly-bag.

yirmbal = large sp. of shark. [Rainbow.]
galng-gan } = species of mullet.
ngan-da }
katabara }
ngamu = shark. [Mother.]
gundiro } = species of stingaree.
min-min }
yerlingantchi }
bekan = eel
dor-norn = "stone"-fish.

(e) *Mollusca*.—The shell of a mollusc is called the "dorsum, backbone."

yir-ni = sp. of cuttle-fish.
mar-ko = rock-oyster
wogro = Arca scapha, Chemnitz.
do-angka = Cyrena Jukesii, Deshayes.
manigai = Pterocera lambis, Linne.
dobbi = Trochus niloticus, Linne.
wandi-ngan = Purpura hippocastaneum, Lamk.
tagalgal = Potamides semisulcatus, Bolton.
kana-ungkun = Haliotis ovina, Chemnitz.
bar-mor = Cytherea gibbia, Lamk.

wa-dur = Potamides fuscum, Schumacher.
ko-mo = Thersites bipartita, Ferussac.
bai-tchen = Monodonta labio, Linne.
moku-burnu = Nerita costata, Chemnitz.
dara = Turbo porphyrites, Martyn
dirikai = Melo diadema, Lamk.
milbar = Nautilus.
warbo-parka = sp. of mussel.
bo-kar = Pearl-shell.
mon-ji = sp. of large clam.

(f) *Crustacea*.—The claws (only) of crabs and lobsters are called "arms." The "shell" of these animals is spoken of as the "dorsum, backbone," the body as a corpse, etc. (dodi). The "feelers," i.e. antennæ, of a lobster are known as the "beard"; a lobster-tail has the same name as a stingaree-tail.

wan = sp. of crab.
yelng-gor = lobster, crayfish.

ngeren = the legs (except the claws).

(g) *Insects*.—All insects have "arms" and legs," but a centipede has only "arms": they have "wings," "eggs," "bodies" (dodi); their sting is said to be a biting (dindal) or a digging (bakal).

A green-ant's nest is called a "belly" (kambul).

A "crysalis" is named after the particular insect which makes it, the insect being said to tie or tangle itself up: see durla = flood.

ding-kan = any and every insect.
walbulbul = moth, butterfly.
bo-nur = caterpillar.
dabaga = fly.
mo-wo = mosquito.
murla = bee. [Honey. Sweet.]
bo-bo = sand-fly.
yangga = green-ant.

kira = all other ants.
bokol = ant-hill.
bolobol = spider.
magar = cob-web. [Fishing-net.]
wogol = flea, louse.
bondil = grass-hopper.
galai-ya = centipede.

(h) *Echinoderms*.—gor-lo = sea-urchin.
makirl-makirl = star-fish.

(k) *Polyzoa*.—garol = sponge.

9. Nouns: Names of Plants.

(a) *General*.—

bor = dried grass, and so a bird's nest, and thus applied to any nest, except a green ant's, from a scrub-hen's to a turtle's or crocodile's (with no dried grass in it).
por-nga = under-growth, bushes [probably connected with bor].
milka-barancha = fern in general. cf. milka = ear, in connection with the curled shape of the young plant, and baral (Blechnum orientale), a special edible fern.
gun-gun = scrub.
yelmba = forest. [cf. yorlumbu = hill-ock. Even in English "wood" does not imply trees, as is seen in the northern form of the word "wold," which is applied to hills.—J. M. D. Meiklejohn.]
ma-yi = any edible plant or vegetable, as opposed to mina, any edible animal.

gulbu = pulp formed in preparation of the mangrove, dioscorea, etc.
munu = any grass.
yoku = any tree. "Fire-wood." [Horn of a bullock.]
y.-wulunggur (light) = a fire.
di-ngal = tree-butt, leaf- and flower-stalk.
mil = [eye] kernel of nut, e.g. Cycas, etc.
kuman = [leg] roots.
ngara = [skin] bark.
ngakul = [arm] bough.
pinda = little branch.
gimil = stick.
daba = stick.
durbu = any young shoot.
gala = [fork of the legs] fork.
pir-ra = leaf.
moku = [dorsum, back-bone] mid-rib of a leaf, fruit, seed.
uganka = flower.

(b) *Special*.—In the following list of plants, those marked with an asterisk are of non-economic value to the local blacks. All of them have been identified for me by the Colonial Botanist, Mr. F. M. Bailey.

bandir-bandir	= <i>Abrus precatorius</i>	wau-ar	= * <i>Grevillea polystachya</i>
dun-dul	= <i>Acacia flavescens</i>	tandai	= <i>Hæmodorum coccineum</i>
(w)o-yur	= „ <i>holocarpa</i>	gung-an	= <i>Hardenbergia retusa</i>
wa-run	= „ <i>holoserica</i>	irnbar	= * <i>Heleocharis cylindrostachys</i>
nganin	= * <i>Acanthus ilicifolius</i>	ma-bil	= <i>Heleocharis sphacelata</i>
dor-churn	= <i>Amomum dallachyi</i>	dirn-bur	= <i>Imperata arundinacea</i>
bandilin	= <i>Amorphophallus galbra</i>	molomul	= * <i>Indigofera pratensis</i>
gar-gil	= <i>Andropogon schœnanthus</i>	kalborngga, dirndol	= <i>Ipomœa angustifolia</i>
ba-bun	= <i>Avicennia officinalis</i>	waintchor	= „ <i>pes-caprœ</i>
kabir	= <i>Banksia dentata</i>	yong-an	= „ ? sp.
baral	= <i>Blechnum orientale</i>	do-bi	= <i>Livistona australis</i>
nanggarbura	= <i>Bombax malabaricum</i>	morunggo	= <i>Lucuma sericea</i>
bambir	= <i>Bruguiera rheedii</i>	walu-nguriga	= * <i>Marsilea quadrifolia</i>
bandai	= <i>Buchanania Muelleri</i>	bo-du	= <i>Melaleuca leucadendron</i>
dataitchal	= * <i>Buckinghamia celsissima</i>	di-eni	= <i>Melastoma malabathicum</i>
go-ra go-ra	= <i>Calamus australis</i>	warboboga	= <i>Microstemma tuberosum</i>
ngan-in	= „ <i>caryotoides</i>	ngundar	= <i>Mimusops Browniana</i>
an-chai	= <i>Calophyllum inophyllum</i>	do-gon-tcha	= <i>Morinda citrifolia</i>
gun-dar	= <i>Canarium australasicum</i>	de-kir	= <i>Nymphœa cœrulea</i>
boggo	= <i>Carallia integerrima</i>	ngu-ri	= <i>Nymphœa cœrulea</i>
balandal	= <i>Careya</i> sp.	nga-wuro	= <i>Nymphœa gigantea</i>
dalgan	= * <i>Casuarina equisetifolia</i>	mum-ba	= <i>Nymphœa cœrulea</i>
milka-barancha	= * <i>Cheilanthes tenuifolia</i>		(seeds)
diremandi	= <i>Cocos nucifera</i>		(bulbs)
mur-gan	= <i>Colocasia macrorrhiza</i>		= <i>Nymphœa cœrulea</i>
gom-ol, batti	= <i>Curculigo ensifolia</i>		(seeds)
an-dan	= <i>Curcuma australasica</i>		= <i>Pandanus</i> ? sp.
ba-dur	= <i>Cycas media</i>		= „ ? sp.
mu-nu	= * <i>Cynodon dactylon</i>		= „ ? sp.
woromoku	= * <i>Cyperus longiseta</i> , eleusinoides		= <i>Parinari nonda</i>
milka-yaboga	= * <i>Desmodium</i> sp.		= <i>Persoonia falcata</i>
gal-gur	= <i>Dioscorea sativa</i>		= <i>Plectronia barbata</i>
ko-lin	= <i>Diospyros hebecarpa</i>		= „ <i>odorata</i>
wanggar	= * <i>Dischidia nummularia</i>		= * <i>Pollinia irritans</i>
mal-kan	= <i>Dolichos biflorus</i>		= <i>Pongamia glabra</i>
do-war	= <i>Drymophloeus normanbyi</i>		= * <i>Restio tetraphyllus</i>
mu-lun	= <i>Elæocarpus grandis</i>		(see <i>Indigofera</i>)
mu-nu	= * <i>Eleusine ægyptiaca</i>		= <i>Rhodomyrtus macrocarpa</i>
wa-pan	= <i>Enhalus kœnigii</i>		= * <i>Rottboellia ophiuroides</i>
yuri-nga	= <i>Entada scandens</i>		[Note: Daba-daba = tall.]
ban-cha	= <i>Eriosema chinense</i>		ya-ro-gorl
gam-bar	= <i>Erythrophloeum Labouchei</i>		= <i>Scyphiphora hydrophyllacea</i>
ngaingar	= <i>Eucalyptus phœnicia</i>		dalmba
bannapan	= <i>Eugenia cormiflora</i>		= <i>Semecarpus anacardium</i>
delloi	= „ <i>suborbicularis</i>		mu-nu
bo-nu-boi	= <i>Exocarpus cupressiformis</i>		= * <i>Setaria glauca</i>
balng-galng-ga	= <i>Fenzlia obtusa</i>		bam-bu-bal
de-bor	= <i>Ficus opposita</i>		= <i>Siphonodon pendulum</i>
ber-di-ga	= „ <i>platypoda</i>		bai-tchin
bo-go	= „ ? sp.		= <i>Spinifex hirsutus</i>
go-ika	= <i>Fluggea obovata</i>		go-rar-bar
yerer	= <i>Gahnia paittacorun</i>		= <i>Sterculia quadrifida</i>
detchi	= <i>Gmelina macrophylla</i>		dumin, to-min
			= <i>Terminalia catappa</i>
			ngo-go-ro
			= „ <i>sericocarpa</i>
			wan-na
			= <i>Triglochin procera</i>
			ko-nâ-ra
			= <i>Vitex glabrata</i>
			ganggurur
			= <i>Vitis acetosa</i>
			bu-yan
			= „ <i>clematidea</i>
			kabagar
			= * <i>Wormia alata</i>
			pungga
			= <i>Xanthorrhœa arborea</i>
			nganda-banggan
			= <i>Xerotes longifolia</i>
			gangga
			= sp. of yam.

10. Nouns : Names of Inanimate Nature.

nambal	= any and every stone, large or small.	dogar	= sand.
ngâr-a	= white quartz.	dogar-e (in, with)	= sandy country, a desert.
ganggar	= quartz crystal.	man-tchal	= hill, mountain.
bobo	= ground, earth, country.	yorlm-bu	= hillock, ridge [see yelmbe = forest].
b.-dir (with)	= muddy.	wobur	= crest of hill.
b.-dabal-dabal (level)	= a plain.	w.-n (euphonic) -tchir (with) -mal (be)	= to be with a [big] hill, have a belly-ful, and so, to be satisfied.
gamai	= white clay.	dau-wul	= precipice.
wo-ba	= red clay.	gan-go	= a gap.
bar-ga	= yellow clay.		

diar	= hole.
dudan	= road [<i>cf.</i> dudara = to run, dadara = to walk, etc., durla = flooded creek].
piri	= creek, river.
moledin	= creek, river.
purai	= water.
p.-warka (big)	= sea.
p.-kaka (bitter)	= sea.
p.-ninda (thin)	= shallow water.
p.-dalon (blue)	= deep water.
ma-tji	= rain.
bun-ji	= swamp.
durla	= flooded river or creek, a flood [<i>cf.</i> durlara = to wash].
d.-kadaltchal (to tie up)	= to tangle a string.
borer	= island.
dingal	= mainland.
d.-bauwal (to light a fire)	= daybreak.
yual	= beach.
wauwu-wointchor	= gust of wind. (<i>See</i> wau-wu = human breath.)
walbur	= N.W. wind. [There is no general term for wind.]
dan-gai	= S.E. wind.
gumbamu	= N. "
bedu	= S. "
tji-ri	= sky.
tji-rai	= twilight.

melu	= shade, a day without a night.
ngol	= shadow.
ngolmanchi	= darkness.
ngumbar	= shadow.
wudur	= darkness, night.
w.-be (rest in)	= night-time.
budur	= darkness.
ngurku	= darkness, evening.
ngalkal	= smoke [Tobacco].
ngulban	= cloud.
wambo	= ashes.
wulunggur	= light as opposed to dark- ness.
yoku-wulunggur	= timber-light = fire.
derri-melli	= thunder (a person).
d.-wulunggur (light)	= lightning.
keda	= moon.
dau-ar	= star.
ngalan	= sun.
n.-gumbo (urine)	= sun's rays.
n.-be (rest in)	= day-time.
n.-be (rest in) - budo (sign of added emphasis)	= mid-day.
n.-wanggar (high) - budo (added emphasis)	= sun highest, <i>i.e.</i> mid-day.
n.-ngurku (darkness)	= from mid-day to the time the sun begins to set.
n.-walmalma (to rise)	= sun-rise.
n.-puleli (to fall down)	= sun-set.
yirmbal	= Rain-bow [A large sp. of shark].

11. Nouns: Names of Manufactured Articles.

kadagai	= a man's or woman's moveable possessions (<i>cf.</i> kadaltchal = to tie up).	gambar	= gum-cement made from the tree (<i>Erythrophloeum Labou- cherii</i>) of that name.
dan-gara	= a parcel rolled up in tea-tree bark.	burlal	= fire-sticks (<i>cf.</i> burla = both: they are always in pairs).
burn-ga	= [Kangaroo-pouch] = fibre- twine dilly-bag. The top- string, pe-ba, on which it is manufactured, is the "father" (<i>cf.</i> our "foundation"): the mesh itself has no name.	b.-damalmal (to give force, impetus, motion to)	= to spin, twirl.
dirn-bur	= the plant (<i>Imperata arundi- nacea</i>) from which the grass- fibre dilly-bag is made, and so gives the name to this bag. Its strands, or rather those of the warp, are spoken of as the walar or "beard," those of the weft being called the moku or "back-bone."	mil-bar	= shoulder-ornament and spoon, both made from the shell (<i>nautilus</i>) of that name.
dirn-bai	= handle-string of both kinds of bag.	tabul	= nose-pin.
dung-go	= base, bottom of both kinds of bag. The natives, also, in both kinds of bag, speak of the "mouth" and "lips" (free edge), and the "inside" (wau-wu).	warboparka	= spoon made from the shell (a mussel) of that name.
bir-la	= leaf-scale trough.	magar	= [cob-web] fish-net.
gurlng-go	= (box-wood, etc.) bark trough.	mai-al	= water-gourd, after the plant from which it is derived.
ngolu	= crinkled extremity in both troughs.	gumbin	= string, plait-work. A loop in a piece of a string is milka, an "ear."
pe-gur	= wooden pin fixing the crinkled extremities of the bark trough. In both troughs, the base, bottom is called the "dorsum."	gurka	= large rope.
dirm-ba	= yam-stick.	mamandur	= spin-top.
ga-na	= yam-stick.	m.-damalmal (to give force, impetus, motion, to)	= game of spin-top.
dirikai	= shell (<i>Melo diadema</i>) which is chipped down to make a boiler, which thus receives the same name.	vir-pi	= tassel, and so an apron belt. [<i>cf.</i> yirmbi = lip, the moustache hairs hanging over it like tassels]. The belt-portion of the apron belt is the "dorsum, back- bone."
		doba	= round disc cut from trunk of Cycad, etc., for spearing at.
		d.-damalmal (to give motion, etc., to)	= game of spearing the disc.
		murur	= cicatrices for decorative, etc., purposes.
		dirl-ngar	= pearl-shell necklace.
		wang-gar	= [button-orchid], grass-bugle necklace, (and so comes to mean our "beads").
		mong-gau	= armlet made from the leaf of the plant (<i>Pandanus</i>) of that name.

ko-maral	= pearl chest-ornament.	wang-ga	= canoe.
bulng-gar	= chain-worked mourning string. The over-cast mourning string is called "dorsum, back-bone."	w.-dir (with)	= (the girls) with the canoe, i.e. the Pleiades.
kapan	= scratch, cut, mark, "cat's cradle."	dar-man	= outrigger of the canoe.
k.-yitartchir	(to put down) = the game of imitating tracks in the sand.	bantchan	= body "
ni-ma	= grave (as a hole in the ground).	wakka	= prow "
kalka	= any and every spear.	gorumon	= stern "
mu-lon	= species of spear.	kanna kanna	= cross-pieces "
de-kara	= "	tabul	= pieces attaching outrigger to canoe. [cf. term for nose-pin.]
ku-yan	= "	yirmbar	= the two pieces of flat board lashed along top-edge of either side of the canoe. [yirmbi = lips.]
yin-ba	= "	biribe	= paddle
wurpoi	= "	bayen	= hut (cf. bai-tchar-tchir = to cover. [The entrance is the "mouth," the roof and walls the "dorsum."])
nam-bar	= "	ka-rar	= sticks forming the scaffolding of a hut.
do-war	= so called from the timber (Drymophloeus Normanbyi) of that name.	nang-gor	= camp (cf. ning-galng-gal = to sit down).
mu-rong-al	= species of spear.	damar	= grass-shed.
mil-bir	= wommera.	walmba	= log put across a stream to cross it, a forked limb put up against a tree to climb it, etc.
gur-ma	= stone-oven.		
gurma-we	(in) yitartchir (to put down) = to bake.		
[purai-a	(water-in) bau-wal (to cook) = to boil].		
yulal	= any flat piece of wood [boat, ship, etc., composed of planks.]		

12. Nouns: Gender.

(a) Amongst human beings, exceptionally amongst animals, is expressed by separate words: e.g.

bama = man. ngando = woman.
dirainggur = old man. kamba-kamba = old woman.
diran, yerka = boy. waral, kabir = girl.
bornda = male turtle. mami-ngu = female turtle.

(b) Amongst animals, by the terms indicative of boy and girl.

kutchal-yerka = male eagle-hawk.
kutchal kabir = female "
goda-dirain = he-dog.
goda-waral = slut.
golan-dirain = male opossum.
golan-waral = female "

[Note: The modification of the word diran into dirain, cf. dirainggur = an old man.]

The compounds so formed constitute one word for subsequent inflexion.

(c) Sex in plants is not recognised.

13. Nouns: Dual and Plural.

(a) The *dual* is expressed by the term—

(i.) "burla" when one or both are particularised.

Kalkadu burla Daku dadara = Kalkadu and Daku are going away. But supposing that, instead of Daku, the man or woman who accompanies Kalkadu does not trouble or interest me, I could quite correctly express myself as—

burla Kalkadu dadara, or

Kalkadu burla dadara,

the "burla" signifying the duality. Again, were I to say—

ngando burla Kalkadu dadara,

this would not only mean that Kalkadu and the woman are taking their departure, but signify incidentally "I know the woman as well as you do, but I can't remember her name."

(ii.) "godera," two, the second numeral, when neither are particularised. Thus—

dibar-dibar bama godera dadara =

southwards man two go, i.e.

There are two men going southwards: (I don't know either of them).

(iii.) Sometimes the two forms are used together.

Bama burla-godera goa-l-mun kadara =

man both-the two the west-from come, i.e.

There are two men coming from the west.

(b) The *plural* is indicated by the suffix -ngai, the compound so formed undergoing inflexions as one word.

ngando nulu ngondu kadara =
the woman she hither comes, i.e.
The woman returns.

ngando-ngai dana dadara =
the women they go, i.e.
The women take their departure.

So again,

ganggal-ngai dana mayi { pudal
children they food { pudaral =
eat, i.e.
Children eat food.

peba nulu ganggal-ngai kundal =
the-father he (his) children is-striking, i.e.
The father strikes his children.

In addition to their regular plural, a few nouns have an irregular one in the suffix -gar. Yaba (brother): yaba-ngai and yaba-gar. Ngamu (mother): ngamu-ngai and ngamu-gar. But even when the form -gar is used, the form of -ngai may be subsequently added: thus it is quite correct to say yaba-gar-ngai and ngamu-gar-ngai.

There are several nouns which, though in the singular form, have a plural meaning: *e.g.*—*kuman* = a leg or legs (of one and the same person), *pirra* = a leaf or leaves (from one and same tree), *mina* = an animal or animals (of the same kind), *dirtchir* (= any bird), *gangga* (= a sp. of yam), *ganguru* (= kangaroo), *bama* (= man), etc., can all be similarly used. Of course we can quite grammatically employ the plural form, but usually the word would constitute a different meaning: *e.g.*—*kuman-ngai* = people's legs in general, many of them, not one-man's in particular; *pirra-ngai* = leaves from different trees; *mina-ngai* = lots of different animals.

14. Nouns: Case.

(a) *Nominative*.—The nominative denotes the subject, and is placed first in the sentence.

bama nulu ninggal = the-man he sits-down. Ganguru nulu mayi pudaral (*or* pudal) = the-kangaroo it vegetable-food eats.

[Note: This word "mayi" in contradistinction to animal food or "mina," one or other of which is always used (even when not expressed in English) with pudarā, the verb "to eat." Furthermore, one or other of these two words is always expressed, even if the name of the plant or animal is mentioned.]

(b) *Vocative*.—The vocative (hi! here! etc.) is expressed by *ga!* or *ga-u!* alone, or by *ga!* or *ga-u!* placed before or after the name of the person or thing addressed.

[Note: Na! = now here! look here! listen! etc., probably connected with namalma = to see.]

(c) *Possessive*.—These are formed as follows, by particular suffixes :—

(i.) When the article possessed is not in its real lawful owner's possession, -ga.
magar peba-ngato-n-ga = my father's net; *i.e.* the net belongs to my father,
but it is not in his actual possession.
magar dirainggur-ga = the old-man's net; *i.e.* with similar reservations.

(ii.) When the article possessed is actually in its real lawful owner's possession (the lawful owner not being represented by a personal pronoun-possessive, or by a numeral) : -we after a vowel, -be or -e after a consonant.

yambun gauguru-we = the kangaroo's pup (the pup being still in its mother's keeping).

milka bama-we = the man's ear.

magar dirainggur-be = the old-man's net; i.e. the net belongs to the old man, and is in his actual possession.

[Note : That the word "dirainggur" forms an exception to the rule concerning a vowel or consonant, in that all the form -be, -we, can be used here. So also the word "kabir" forms kabir-e.]

(iii.) When the article possessed is actually in its real lawful owner's possession (the lawful owner being represented by a personal pronoun possessive or numeral): -me after a vowel, -be after a consonant.

magar peba-ngato-me = my father's net, and actually in his lawful possession.

magar peba-ngantanun-be = our father's net, etc.

magar dirainggur-godera-me = the two old-men's net, and it is actually in their lawful possession.

(d) *Objective.*—

(i.) Where the object is in the direct action of the verb, the noun objective takes no special suffix, but is placed before the verb :—

ngando nulu ganggal-nangu kundal =
the woman she child-of her's strikes, i.e.
the woman strikes her child.

bama nulu peba-nangu kundai =
man he father-his struck, i.e.
the man struck his father.

dirainggur nulu diral-nangu kundanu =
an old-man he wife-his will strike, i.e.
an old man will strike his wife.

(ii.) Where the object is in the indirect action of the verb, recourse is had to various prepositional inflexions, etc.

15. Pronouns: Personal.

(a) *Nominative.* These never express the different forms of the European auxiliary verb "to be." They are always inserted even with the nouns they qualify: thus "a man walks" is translated as "a man he walks."

Number.	Person.		
Sing.	1	ngayu	I
	2	nundu	thou
	3	nulu	he, she, it
Dual	1	ngali	we two
	2	yubal	you two
	3	burla	they two
Plur.	1	ngantan (or ngana)	we
	2	yura	you
	3	dana	they

(b) *Possessive.*

Number.	Person.		
Sing.	1	ngato	my
	2	nanu	thy
	3	nangu	his, her, it's
Dual	1	ngali-nun	our (two)
	2	yubal-en	your (two)
	3	burla-ngan	their (two)
Plural.	1	ngantan-un } or ngana-ngan }	our
	2	yura-ngan	your
	3	dana-ngan	their

These possessives are always inserted with relatives: (unlike a European speaking of his parents as "Father," "Mother," etc.)

Furthermore, with the first person only, combined with "father," "mother," "brother" only, the "ngato" is often contracted to "-to": thus—

peba-to, *i.e.* my father.

ngamu-to, *i.e.* my mother.

yaba-to, *i.e.* my brother.

These pronouns are placed after the nouns they qualify (just like adjectives), and together usually constitute one word, so far as subsequent inflexions are concerned.

From the above personal pronouns possessive, are derived the following secondary possessives, denoting—

(i.) location, rest at, the particular individual's place of residence.

(ii.) location, person's place, whence something is obtained or received.

Number.	Person.	(i.) Rest at, particular individual's residence, "at my (place), etc."	(ii.) Location at person's place, whence something is obtained or received, "obtained from my place, etc."
Sing.	1	ngato-me	ngato-mun or ngato-mun-ngan
	2	nanu-me	nanu-mun or nanu-mun-ngan
	3	nangu-me	nangu-mun or nangu-mun-ngan
Dual	1	ngali-nun-ga-me	ngali-nun-ga-mun
	2	yubal-en-ga-me	yubal-en-ga-mun
	3	burla-ngan-ga-me	burla-ngan-ga-mun
Plur.	1	ngantan-un-ga-me (or ngana-ngan-ga-me)	ngantan-un-ga-mun (or ngana-ngan-ga-mun)
	2	yura-ngan-ga-me	yura-ngan-ga-mun
	3	dana-ngan-ga-me	dana-ngan-ga-mun

(c) Objective.

A. Direct Object.

Number.	Person.		
Sing.	1	ngani	me
	2	nina	thee
	3	nangu	him, her, it
Dual	1	ngali-n-un	us two
	2	yubal-en	you two
	3	burla-ngan	them two
Plur.	1	ngantan-un (or ngana-ngan)	us
	2	yura-ngan	you
	3	dana-ngan	them.

B. Indirect Object.

These vary according as we wish to express :—

(i.) Person, motion towards, *i.e.* towards me, thee, etc.

[*Note:* Ngon-du : “towards me,” “towards us” (only), and so comes to mean “hither.”]

(ii.) Person from whom something is obtained or received, *i.e.* from me, to me : from thee, to thee, etc. [This form is identical with (i.)]

(iii.) Person, rest with, *i.e.* with me, with thee, etc.

(iv.) Person, for whose benefit or advantage something is done, *i.e.* for my benefit, for thy advantage, etc.

(v.) Person, donation to, *i.e.* to me, to thee, etc.

Number.	Person.	Person : motion towards. Person : from whom something is obtained or received.	Person : rest with.	Person : for whose benefit or advantage.	Person : donation to.
Sing.	1	ngato-n-ga	ngato-n-gal	ngato { -mu -ngu	ngato.
	2	nanu-n-ga	nanu-n-gal	nanu { -mu -ngu	nanu.
	3	nangu-n-ga	nangu-n-gal	nangu { -mu -ngu	nangu.
Dual	1	ngali-n-ga	ngali-n-gal	ngalin-ngu	ngalin-un.
	2	yubal-en-ga	yubal-en-gal	yubalen-ngu	yubal-en-be.
	3	burla-ngan-ga	burla-ngan-gal	burla-ngan-ngu	burla-ngan-be.
Plur.	1	ngantan-un-ga (or ngana-ngan-ga)	ngantan-un-gal (or ngana-ngan-gal)	ngantan-un-ngu (or nganangan-ngu)	ngantan-un-be (or ngana-ngan-be)
	2	yura-ngan-ga	yura-ngan-gal	yura-ngan-ngu	yura-ngan-be.
	3	dana-ngan-ga	dana-ngan-gal	dana-ngan-ngu	dana-ngan-be.

16. Pronouns : Relative.

(a) *Nominative.* “Who,” “which,” etc., is not translated, the relative sentence being placed in close apposition with the subject.

bama diral nangu-go bantchen-chil : nulu bodan =
man wife his-own nurses : he good, *i.e.*

the man who nurses his own wife is a good fellow.

[*Note:* The “bama” is expressed in a particular tone of voice, as otherwise the “nulu” might refer to the diral.]

(b) *Possessive.* This is translated by the prepositional inflexion -ga.

yerka-ga kalka nundu mani : ngayu nangu dabi =
the boy- { obtained } from spear you took : I him kicked, *i.e.*
 { received }

I kicked the boy { whose spear you took.
 from whom you took a spear.

(c) *Objective.* “Whom,” “which,” are not translated, but the relative sentence is closely apposed with the subject.

bama nundu kundal : ngayu nangu namalma =
the man you are-beating : I him see, *i.e.*

I see the man whom you are beating.

Again,

nundu bama-we kalka wudinu : ngayu nangu nadi =
you the man-to a spear will-give : I him saw, *i.e.*

I saw the man to whom you will give a spear.

[*Note:* The tone of the voice with “bama-we” distinguishes the “nangu” as referring to the man and not to the spear. On the other hand, to prevent any possible mistake, we could quite correctly say :—ngayu bama nadi = I the-man saw ; or, ngayu bama-nangu nadi = I the man-him saw.]

17. Pronouns: Definite.

This, that, etc., is translated

- (a) By the article, etc., referred to, being here or there—
 goda yewai = the-dog here, *i.e.* this dog.
 goda nayun = the-dog there, *i.e.* that dog.
- (b) By the points of the compass alone—
 ganguru goa = the-kangaroo in-the-west, *i.e.* that kangaroo there.
- (c) By the points of the compass, with "nayun"—
 wandar nayun dibar = cockatoo there in-the-south, *i.e.* that cockatoo there.
- (d) By "yinaren" = these, in close proximity (but not used in the dual)—
 dirtchir-ngai yinaren waril = these birds fly.
- (e) By the suffix -gala = the very same, *e.g.* In answer to the question "Is that it?" where we should say, "Yes! the very same," the blacks would reply "nulu-gala" (it- the very same).

18. Pronouns: Interrogative.

- (a) *Who?* (referring to things singular and plural) = wan-du?
 [wan-un? = whose? .wan-un-be? = to whom? .wan-un-ga? = from whom?]
 wandu ninggal? = who is sitting down?
 wandu (mayi) pudal? = who eats?
 ngando wandu dadara? = who is the woman that is going?
 kalka wanun? = whose spear?
- (b) *Which? what?* = ngan-na?
 nganna dudara? = what is running?
 nganna nundu karbalbal? = what are you holding?
 mina nganna? = what animal?

19. Nouns and Pronouns may be qualified by the suffix -go indicating

- (a) *one's very own, only*, in the sense of independently of all others.

	In answer to the question	
ganguru-go	what did he get?	kangaroo only.
nulu-go	who was there?	he only.
ngato-go	whose is it?	mine only, my very own.
ngato-me-go	at whose place?	at my place, and nowhere else.
godere-go	how many?	two only.
kundoi-go	" "	three only.

[Note: The two last forms are slightly irregular, being made from "godera" and "kundo" respectively.]

- (b) *Only, alone, specially*, in the sense that more or better are expected, is expressed by "murga." Thus, in answer to the question "How many came?" we could say "murga godera," *i.e.* "two only, but we expected more."

20. Indefinite Articles.—"a" and "the" are not translated.

21. Verbs.

(a) The verb agrees with its subject in point of time only, as shown by means of special inflections. Verbs always come last in the sentence. The particular number and person is indicated only by the subject-noun or pronoun: in other words, singular, dual, and plural are alike.

[Note: There are no pronouns used specially with verbs, *i.e.* no verbal pronouns as in the Boulia district.]

Verbs often have a double form, but these constitute no difference in meaning: in the following list, representing the present tense indicative, both forms are given. [In this same list compound-verbs are omitted: all such are to be found under the headings of the various nouns, adjectives, etc., from which they are derived.]

badal, bada-ral	= taste, sample. [Also involves the idea of "temptation."]	birbal, birbal-bal	= put on, wear, gather around one.
bai-tchar, bai-tchar-tchir or bai-tchir-tchir	= cover.	birlil, birli-lil	= paddle.
bakal, bakal-kal	= dig, sting.	budar, budar-tchir	= blow (something).
balkal, balkal-kal	= make, imitate.	burn-tchir, burn-tchirn-tchir	= gather, collect, hunt.
bandan-daya	= break open, burst (<i>e.g.</i> chicken and egg).	burn-tchal, burn-tchan-tchal	= lick, lap up (like a dog).
bandil, banden-dil	= count, cut.	burn dal, burn-dan-dal	= to clean up, to clear an open space.
ban-tchil, bantchen-tchil	= wait, attend to, nurse.	dabil, dabel-bil	= push, kick.
barbil, barbel-bil	= stay, lie down, sleep.	dada, dada-ra	= go, walk, flow.
bar-ngal, bar-ngal-ngal	= cry.	dagil, dagel-gil	= build (a hut).
ba-tchil, ba-tchel-tchil	= cry, sing.	dalmba-kabal, dalmba-kabal-bal	= throw down.
bau-wal, bau-wal-al	= light a fire, cook, roast.	damal, damal-mal	= apply impetus, force, motion, etc., to anything (<i>e.g.</i> throw a spear, spin a top).
bieni, bieni-eni	= die.		

dambar, damban-bar	= throw (spear), eject (spittle).
danggur, danggurn-gur	= scratch, kick.
dan-tchil, dantchen-tchil	= dive.
dargar, dargar-gar	= grow, swell up (e.g. pregnancy).
dawa-ngal, dawa-ngal-ugal	= call, beckon.
degal, degal-gal	= send.
detchur, detchur-tchur	= command, order, allow.
dindal, dindan-dal	= hit, bite.
di-ngal, di-ngal-ngal	= laugh.
dirbal, dirbal-bal	= abduct, run away with (people or things).
dirmbal, dirmbal-bal	= tease.
dirmal, dirmal-mal	= knead.
dogil, dogel-gil	= sluice (with water poured from above).
doril, dore-lil	= eject (faeces, egg, child).
dubil, dubelbil	= leave, relinquish, bequeath, give up to.
duda, duda-ra	= run.
dumbil, dumbelm-bil	= break.
dundal, dundan-dal	= soften.
durlar, durlar-ar	= wash.
durnggal, durng-galng-gal	= smear, grease.
dur-ngal, dur-ngal-ngal	= push away.
gai-tchil, gaitchel-tchil	= vomit.
garnbar, garnbarn-bar	= jump over, cross [c.f. gargur = frog].
gural, gural-al	= say, make (e.g. water sweet), etc., put together [c.f. gorai-go].
kadal, kadal-tchal	= tie up [c.f. kadagai = moveable possessions].
kada, kada-ra	= come.
karbal, karbal-bal	= hold, touch.
kobarbil, kobarbel-bil	= bury.
kundal, kundan-dal	= strike, fight.
mabil, mabel-bil	= climb (trees).
marbal, marbal-bal	= get tired.
maril, marelil	= swim.
melbil, melbel-bil	= promise.

meril, merelil	= tell, show, explain.
mitar, mitar-tchir	= lift.
muril, mure-lil	= forbid.
na-ngar, na-ngar-ngar	= shake (the hand : the wind shaking the tree, etc.).
nenggur, nenggur-goror } nenggun-gur }	= throw away, empty out.
ngalbil, ngalbel-bil	= steal.
ngalbur, ngalbur-bur	= shut in, surround.
ngalgal, ngalgal-gal	= lead.
ngandal, ngandan-dal	= refuse.
ninggal, ninggalug-gal	= sit down, be (animate things).
numbil, numbel-bil	= swallow.
nuyal, nuyal-al	= accuse.
pudal, pudar-al	= eat, drink.
pule-lil	= fall down.
purn-tchal, purn-tchan-tchal	= drag along (and so, to pull a canoe).
pur-ngal, pur-ngal-ngal	= pull (out of ground), e.g. roots, yams.
wolm-bal, wolm-balm-bal	= turn (the head) round, roll, turn [cf. walu = temples, side].
wamil, wamel-mil	= see closely, go to meet, approach.
warngal, warngal-ngal	= let loose, take off, untie [let loose, a whistle, hence goimbor warn-galngal = to whistle].
waril, ware-lil	= fly.
wogur, wogur-gur	= gather, plait, collect, hunt.
wointchor, wointchorn-tchor	= fan, start a breeze [but only used with the wind].
wokil, wokel-kil	= cut.
wurgal, wurgal-gal	= feel pain.
yandal, yandan-dal	= rise, stand up.
yatchil, yatchel-tchil	= roast, cook.
yirgal, yirgal-gal	= speak.
yirngal, yirngal-ngal	= wind round.
yitar, yitar-tchir	= put (something) down on.
yiwar, yiwar-ar	= look for something (but not necessarily to find it), ask.
yiwar-ngaraya	= lose.

The following should be noted :—

-mul (= without) may be suffixed to verbs to imply total absence of the condition expressed by the verb. [For its use see sect. 29 (c) (vi).]

-baka is suffixed to verbs, but not itself inflexed, to denote a special habit or vocation :—

kalka balkal-baka = spear-maker, i.e. the one makes nothing else but spears.

meril-baka = tale-bearer, scandal-monger, i.e. the one who does nothing else but tell tales.

[cf. our terms, "Baker," "Weaver," etc.]

(b) There is no special form of the verb to express the *Passive*, but it is rendered by the person passive being placed in the objective case, the individual whence the action proceeds being understood.

ngayu kundal = I strike.

ngani kundal = (somebody) me strikes, i.e. I am struck.

(c) The verb "to be" in the sense of actual existence is translated by the verbs.

u-na = to lie down, for inanimate objects.

ning-gal = to sit down, for animate objects.

(d) The verb "to have" is paraphrased, the possessive form of the noun or pronoun being brought into requisition when we wish to particularise the article possessed, thus :

daba ngato una = stick my (lies down, i.e.) exists, i.e. I have a stick.

goda ngato ninggal = dog my (sits-down, i.e.) exists, i.e. I have a dog.

So also :

daba bama-ga una = the man has a stick.

goda bama-ga ninggal = the man has a dog.

22. Verbs—Active.

(a) **Present Tense.**—The inflexions assumed by verbs in this tense have already been illustrated in the preceding list, whence it will be seen that these are: -a, -al, -il, -ir, -or, -ur.

(b) **Past Tense.**—Verbs ending in -a, -al in the present tense become -ai, those ending in -il become -i, and those ending in -ir, -or, -ur become -iren, -oren, -uren, in their past tense. Thus:

dadai, dadarai	= went.
kundai, kundandai	= beaten.
dabi, dabelbi	= pushed.
burnchiren, burnchirchiren	= gathered.
woguren, wogurguren	= plaited.

(c) **Future Tense.**—The inflexion for this tense is -nu.

dada-nu, dadara-nu	= will, etc., go.
kunda-nu, kundanda-nu	= will, etc., beat.
dabi-nu, dabelbi-nu	= will, etc., push.
burnchir-nu, burnchirchir-nu	= will, etc., gather.
wogur-nu, wogurgur-nu	= will, etc., plait.

Some special forms of the *Future*, etc.

(i.) “*about to*,” “*just*,” is translated by nila = now, soon, or by nila-nila = immediately.

ngayu nila-nila mayi pudanu = I immediately food will-eat, *i.e.* I am just about to eat.

(ii.) “*may*,” “*can*,” “*perhaps*,” “*might*,” is rendered by -ya and the accentuation of the first syllable [*cf.* Reflexive verbs, sect. 23 (a) (ii.)].

dá-da-ya	= may, might, etc., go.
kún-da-ya	= “ “ beat.
dá-bi-ya	= “ “ push.

nundu bama kuli gari wamila: nulu nina kúndaya =
you man angry not approach: he you may-beat, *i.e.*

don't approach the angry man: he may beat you.

nundu mina-ganguru gari yinil-gurala: nulu dádaya =
you animal-kangaroo not coward-make: he may-go, *i.e.*

don't frighten the kangaroo: he may clear.

(iii.) “*must*” cannot be translated, there being no compulsion exercised. Of course, I can order or instruct a man to do so-and-so; if he can't or won't, in reply to my importunity, he will say that he is called elsewhere, that he has something else to do, etc.

(iv.) “*would like to*,” etc., = will (do so-and-so) with pleasure, = wauwu-dir (“soul”-with), *i.e.* with all my heart.

(v.) *conditional* “if” “would.”

The condition must be expressed, and the same suffix -nda used in both conditional and dependent sentence: dada-nda, dabi-nda, kunda-nda, burnchir-nda, wogur-nda, etc.

nulu purai nenggor-nda: ngayu nangu kunda-nda =
he water if-throw-away: I him would-beat, *i.e.*

I would beat him were he to throw away the water.

kabir ngato burnga wogur-nda: ngayu nangu dirlngar wudi-nda =
girl for-me dilly-bag if-plait: I to-her necklace would-give, *i.e.*

if the girl were to plait a dilly-bag for me I would give her a necklace.

(vi.) *precautionary, cautionary*, but the precaution, etc., must be expressed or at least understood. This is translated by -gamu, with the past tense of the verb: dadai-gamu, kundai-gamu, dabe-gamu, burnchiren-gamu, woguren-gamu, etc.

nundu ngani gari dirmbala: ngayu nina kundai-gamu =
you me not tease: I you will-beat-if-you-do, *i.e.*

don't tease me: I'll beat you if you do.

ngayu dadanu: nulu ngani kundai-gamu =
I will-go: he me would-beat-if, etc., *i.e.*

I will go: he will beat me if I don't.

(d) **Imperative.**—There is but one form for the whole tense, -a.

dada, dadara	= go!
kundal-a, kundandal-a	= strike!
dabil-a, dabelbil-a	= push!
burnchir-a, burnchirchir-a	= gather!
wogur-a, wogurgur-a	= plait!

If it is wished to express the person, the personal pronoun nominative is used: when no special emphasis is required, this pronoun precedes the verb,—otherwise it follows it.

nundu pudal-a	= eat! (thou)
yubal dadara	= go! (both-of-you)
yura ngondu kadara	= come hither! (all of you)

There are no special forms to denote special conditions as in the Pitta-Pitta language of the Boulia district, e.g. "Let him come" would be translated by "nangu (nundu) degal-a," i.e. him (you) send [imperative], or by "nulu kádanu: nangu gari muril-a," i.e. he will come: him not forbid = "If he comes [future], don't forbid him," the "if" being understood by the accentuation of the verb.

- (e) **Infinitive.**—There can hardly be said to be an infinitive, this being replaced by the future.

peba nulu yumur nangu-go kundanu: nulu bodan ningganu =
father he son his-own will beat: he good will-be, i.e.

a parent will beat his son to make him good.

nanggor-go ngayu ninggal: Kokoyimidir mandenu =
camp- in I sit : Kokoyimidir will learn, i.e.

I am living in the camp to learn Kokoyimidir.

- (f) **Participles and Perfects**—

- (i.) **Present.**—The idea is expressed by the tone and tenor of the voice:—

bama nulu dudara: nulu daba wokil =
man he runs: he stick cuts, i.e.

while running, the man whittles a stick.

nulu kalka balkai: nulu wanggo-puli =
he spear was making: he asleep fell, i.e.

while manufacturing a spear, he fell asleep.

- (ii.) **Past.**—Formed from the past tense of the verb, with -ga

kundai ga = having beaten.
dabe-ga = „ pushed.
dadai-ga = „ gone.

burntchiren-ga = „ gathered.
woguren-ga = „ plaited.
wantche-ga = „ risen.

dudai-ga: nulu daba woki = having run, he whittled a stick.

wude-ga = having given.
numai-ga = „ smelt.
mande-ga } = „ taken.
mane-ga }
yueli-ga = „ stood.
wore-ga = „ played.

- (iii.) **Future.**—Formed identically with the past participle, but a future sentence follows.

mayi pudai-ga: ngayu dadanu =
food having-eaten: I will go, i.e.

when I shall have eaten I will go.

Of course this sentence could be expressed in the form of "I will eat first afterwards I will go." [See Section 29 (d), iii.]

23. Verbs: Reflexive.

"Myself," etc., in the sense "of alone by" me, etc., is translated by -go. [See sect. 19]: thus, ngayu-go burnga woguren = I alone-by-myself a-dilly-bag plaited.

- (a) "**Myself**," "**Thyself**," etc. (true reflexive), is rendered

- (i.) by the active form of the verb with the personal pronoun objective and -go

ngayu kalka durnggal = I a-spear grease.
ngayu ngani-go durnggal = I me-myself grease.
nundu yoku bandil = thou wood art-cutting.
nundu nina-go bandil = thou thee-thyself art-cutting.
nulu kabir kundai = he the-girl struck.
nulu nangu-go kundai = he him-himself struck.
ngayu goda kundanu = I the-dog will hit.
ngayu ngani-go kundanu = I me-myself will hit.

- (ii.) by special forms of the verb—for present, past, and future—with the personal pronoun nominative and -go

	Present.	Past.	Future.
(beat)	kun-dá-ya	kun-da-ti	kundati-nu
(push)	da-bé-ya	da-be-ti	dabeti-nu.
(shake)	nang-ar-nga-rá-ya	nang-ar-nga-ra-ti	nangarngarati-nu.
(gather)	burn-tchir-nga-rá-ya	burn-tchir-nga-ra-ti	burntchirngarati-nu.
(shut in)	ngal-bur-nga-rá-ya	ngal-bur-nga-ra-ti	ngalburngarati-nu.

[Note: The accentuation in the present-tense forms as compared with that in sect. 22 (c) (ii.).]

ngayu-go durng-gá-ya = I-myself grease-myself.
nundu-go ban-dé-ya = you-yourself cut-yourself.
nulu-go kun-da-ti = he himself struck-himself.
ngayu-go kun-da-ti-nu = I myself will-strike-myself.

- (b) "**One with the other**," "**each other**," etc.

dana kundá-ya = they are hitting one another.
„ kunda-ti = „ were „ „ „
„ kunda-tinu = „ will be „ „ „

(c) *Precautionary, Cautionary.* "One with the other," "each other," etc.—Formed from the past-tense modification, with -gamu.

kundati-gamu	burntchirngarati-gamu.
dabeti-gamu	ngalburngarati-gamu.
nangarngarati-gamu.	

yubal gari gulboigo dada: kundatigamu =
you-two not together go: would-strike-each-other, i.e.

don't you two go together: you will be striking each other if you do.

(d) *Participles and Perfects.* Used only in the present and past.

kundati-ga = having struck myself, etc.	} cf. sect. 23 (a) (ii.)
dabeti-ga, etc.	
nang-ar-nga-ra-ti-ga, etc.	
ngalbur-nga-ra-ti-ga, etc.	

24. Verbs: Defective and Irregular.

Unfortunately for the philologist, there are many of these:—

badaya = finish.
dakaya = lie, sit down.
gurna = "permit" me, or anybody else—for what I care: the only form in which it is used.
mandal = fill (used in the past tense—mandai, but is probably a Koko-negodi word).
malmal = be, become. manaya, manati, mati, etc.
namalma = see. nadi (past tense).
(w)unana = lie down, sleep, be (of inanimate things).

The following is a list of the more commonly-used irregular verbs:—

	to give	to rise	to smell	to play	to take, bring (learn, marry)	to stand
Present	(w)umalma (w)uma	walmalma	{ numalma numa	{ worelil woril	{ manana mandendi	yueleli
Past	wudi	wantchi	numai	wori	mane	yueli
Future	wudi-nu	wantchi-nu	numa-nu	wori-nu	mande-nu	yueleli-nu
Conditional	{ wudi-nda wudetchi-nda	wantchi-nda	numa-nda	wori-nda	mande-nda	yueli-nda
Precautionary	wude-gamu	wantche-gamu	numai-gamu	wore-gamu		yuele-gamu
Reflexive	wudi-ya	wantche-ya	numa-ya		mane-ya	
Imperative	wo-a	{ walma wala	numala	worila	mara	yueli

Manana (to take, etc.) is suffixed to certain other verbs to form a compound-verb, the suffix alone being inflexed for the different tenses: it apparently gives a kind of transitive meaning to the intransitive verb with which it is connected: e.g.—

yirngai (past tense of yirngal = to wind): yirngai-manana, etc. = to take round.
yueli (" " yueleli = to stand): yueli-manana, etc. = to make to stand.
badai (a form of badaya = to finish): badai-manana, etc. = to put the finish on.

25. Adjectives.

These are placed after the nouns they qualify, the compound so formed constituting one word for subsequent inflexion.

ganguru warka nulu goda dabelbi = a tall kangaroo was kicking the dog.
bama warra nulu dadanu = the bad man will go away.
bama-warra-ngai dana ganggal ngato kundandal = bad men beat my child.

Some adjectives are used as nouns, and *vice-versa*:—

dau-un = beloved, a friend.
mar-la = honey, sweet.
ping-a = grey-haired, a grey-headed man.

Sometimes an adjective in its original form may be used as an adverb [see sect. 27].

Certain adjectives have an irregular plural, formed of the suffix -gur [Note: The irregular plural -gar of certain nouns, sect. 13 (b)], and may then be used as nouns:—

pita = small, pita-gur = little people, children, etc.
warra = bad, warra-gur = bad people.
bodan = good, bodan-gur = good people.

Again, these irregular plural-adjective nouns (as nouns only) may have the regular plural suffix added on:—warragur-ngai, pitagur-ngai, and bodangur-ngai. On the other hand, the regular plural suffix -ngai can be used with warra and bodan, but only when employed as adjectives,—warra-ngai, bodan-ngai: pita can never be used in this form.

The adjectives in the following lists have been roughly grouped according as they refer to ideas and attributes of weight, colour, shape, size, quality, and quantity.

(a) Ideas, etc., relating to *weight*.

dallel = light.
budar = "
gulnggul = heavy.

(b) Ideas, etc., relating to *colour*. [There is no general term expressive of colour by itself; but the following colours are recognised.]

kandal	= white [and hence, "clear" in the sense of water].
bilbin	= white.
dingga	= white.
woba-dir	= red clay-with, <i>i.e.</i> red coloured, red.
dini	= red.
barga	= yellow colour [as well as yellow ochre].
dalon	= blue.
muni	= dark colours, black.
yetchel	= chestnut [but only applied to animals].

(c) Ideas, etc., relating to *shape*.

go-roin	= crooked.
dumbur	= straight, upright [also = straight in direction].
wonol	= oblique (with the vertical).
banirn	= pointed.
doba	= disc-shaped. [A disc for playing with.]
murū	= short, roundish, knobby.
murū-murū	= rounded, curved.
dabal-dabal	= flat, level.
balai-balai	= "
hala	= flattened [<i>e.g.</i> chest, buttocks, etc.].

(d) Ideas, etc., relating to *size*.

badal	= deep (<i>e.g.</i> a hole) down.
ninda	= shallow [<i>e.g.</i> water] thin.
pita	= small, thin.
warka	= large, thick, big, strong. [Note: Its original meaning,—many, collectively. "Union is strength."]
walal	= wide.
daba-daba	= long, tall, large.
galbai, galbai-go	= "
ngamu-budon	= extraordinarily big. [See ngamu = mother.]

(e) Ideas, etc., relating to *quality*:

bodan	= good, the "normal," virtuous.
warra	= bad, the "ab-normal," dirty. [Applied to non-edible foods.]
kima	= weak.
dadar	= "
mokul	= old.
yerlmbur	= fatty.
burbur	= strong, hard.
buntjil	= [applied to anything broken or disunited, <i>e.g.</i>] broken (tree), widow (woman), cut (string).
kada	= foul (in speech and smell).
dabargo	= nice [in the sense of good looks].
gambir	= cooked.
gayal	= raw, un-ripe.
yimidar	= similar.
yimi-yimidar	= exactly alike.
walu	= [temple, side of face, appearance, and so] like, similar to.
walu-yendu	= appearance-another, <i>i.e.</i> different.
walu-gulboigo	= [sides, etc., together, and so] equal in general appearance.
ngamba	= closed [<i>cf.</i> ngalburbur = to shut in].
mintjil	= hot.
mokain-mokain	= cold.
yar-mun	= "
ban-tehir	= hard to the touch.
matchul	= soft to the touch.
kana	= first in action, place, time, and everything.
dindal	= quick.
dindal-badibe	= (quick-bone'd) very quick, fleet.
ngangoi-go	= quick.
wu-yur	= quick.
da-ni	= slow [especially in the sense of making no noise with the motion].
danga	= rough, prickly.
moi-mon	= smooth.
duna	= moist.
dai-yinggal	= dry.
yirmba	= bitter.
kaka	= bitter, salty (water). [Sickness.]
bindo	= fresh (water). [Health.]
daimbur	= loose (in the sense of skin).

(f) Ideas, etc., of *quantity*.

nobun	= one.
godera	= two. [burla = both, see sect. 13 (a).]
kundo	= three.

[*Note*: Beyond these, all the counting is done in pairs. Burla godera, burla godera = both two, both two, i.e. four. Burla godera, burla godera, nulu nobun = five: this nulu (3rd person pronoun) expresses almost "he is there by himself, odd man, etc."]

nobun-nobun-go	= one, especially by itself, alone, one here one there, i.e. scarce.
pitaigo	= little in quantity [as well as in time].
kundoi-go	= three only, and is used to express any small number, but only in comparison with a large one. It is the nearest term to express our word "few."
kundo kundo	= threes and threes, i.e. many. [Compare our "dozens and dozens."]
ngalba	= many, in the sense of surrounded by, covered with, etc. Ngalba pirra = covered with leaves, ngalba goda = surrounded by dogs.
warka	= many, collectively, all of that particular kind not included. [Also = big, tall.]
warka-ngamu	= many, collectively, all of that particular kind included: with comparison. [See ngamu = mother.]
ngamu-goraigo	= many, same meaning as the preceding, but without comparison.
mundal	= some (of more).
murga	= alone.
yendu	= the other, another, the one the other.
dana nganna?	= they what? i.e. how many? [<i>Note</i> : The expression "how much?" is not translatable.]
kaba, kabaigo	= double.
yerlmbai-be	= half-full, half-closed, etc.
gayin	= full.
banbar	= full, whole, complete.
wornda	= empty.

26. Qualification of Adjectives.

(a) *independently of direct comparison with others.*

by the prefix dara-, e.g.

bama bodan	= a good man.
bama dara-bodan	= a fairly good man—he might be better.
ngando warra	= a bad woman.
ngando dara-warra	= a pretty-bad woman—she might be worse.

by reduplication, e.g.

bodan-bodan	= comparatively good.
galbai-galbai	= " tall.

by the suffix -budon, signifying added emphasis, and so = very, extremely, e.g.

pita-budon	= very, extremely small.
bodan-budon	= very, extremely good.

(b) *dependently on comparison with others.*

(i.) Equality, in time, action, and comparison. Translated by gulboigo = together, in the sense of a pair.

yerka gura kabir galbai	gulboigo =
boy and girl tall	a-pair-together, i.e.
the boy is as tall as the girl.	

(ii.) Similarity is expressed:—

by yimidir = similar, and yimi-yimidir = exactly alike, but in this case there must be something to be compared with, e.g.

milbir nanu nayun una:	ngato yimidir una =
wommera your there is:	mine similar is, i.e.

those wommeras are similar.

milbir ngato yewaigo una:	danangan warka-ngamu yimi-yimidir =
wommera mine here is:	their's all exactly-alike, i.e.

my wommera is like their's.

by walu-gulboigo = sides, etc.-together, i.e. similar in general appearance, but the comparison is not expressed here, e.g. milbir godera walu-gulboigo = the two wommeras (have) a similar appearance.

(iii.) Difference is rendered by walu-yendu = side, appearance, etc.—another, i.e. different, but the two or more things compared must be expressed, e.g.

nanu burnga una:	ngato walu-yendu =
your dilly-bag exists:	mine different, i.e.

these two dilly-bags are different. [Of course, this same idea might be paraphrased thus:—burnga burla gari walu-gulboigo = dilly-bags both not alike.]

(c) *Comparatives*.—These are formed by *gura* = and, more [sect. 28] which is prefixed.

warka = big, strong	gura-warka = bigger, stronger.
dadar = weak	gura-dadar = weaker.
galbai = tall, long	gura-galbai = taller, longer.
murru = short	gura-muru = shorter.
warra = bad	gura-warra = worse.
pita = little	gura-pitaigo (<i>irreg.</i>) = less.

milbir galbai : kalka gura-galbai =

wommeru long : spear longer, *i.e.*

the spear is longer than the wommeru.

ngayu bodan : nundu gura-bodan =

I good : you better, *i.e.*

you are better than I am.

(d) *Superlatives*.—Formed by the prefix *kana* = first, priority, etc., in time, place, action, and everything, as compared with all others [sect. 25 (e)].

kana-dadar = weak-est.

kana-galbai = tall-est

27. Adverbs.

Placed immediately before the verb in a sentence. From a constructive point of view, adverbs may either be independent words by themselves, or else formed from adjectives : among the few belonging to the former category, may be mentioned the following :—

bera	= certainly, indeed, of course.
yerba	= thus, so, as follows, for example.
manu	= only (but as an adverb is used solely in conjunction with other words).
wuren-go	= crossways (<i>e.g.</i> shoulder to opposite armpit).
dirlen	= (in return, in exchange for), therefore, then.
budo	= for good and all (emphatic). <i>See</i> budon.
kana-budo	= first—for good and all, <i>i.e.</i> enough, that'll do, etc.
daki-daki	= slowly.
gari	= not, negation.
goma	= together.
ngoba	= perhaps.
gulboigo	= together, in the sense of a pair, and so equality in time and action.
manu-budon	= certainly, of course. (<i>See</i> manu = throat.)
ma	= ready! right you are!
namo-dir	= thus, so, like this.
namo-ngu	= therefore.
murgara	= in vain.
yewo, yo	= yes, affirmation.
yerlinggar-go	= apart.
kambai	= most likely.
ngon-din!	= expression used if anything is accidentally dropped, if a spear misses its mark, etc., and so indicative of the undesirable, or unforeseen happening. It corresponds to our "missed!" "sold again!" etc.

Adverbs may be formed from adjectives by the suffix *-go*. [*See* sect. 19.]

dani	= slow.	dani-ng-go	= slowly.
dindal	= quick.	dindal-go	= quickly.
warra	= bad.	warrai-go	= badly.
bodan	= good.	bodan-go	= well.
pinal	= clever.	pinal-go	= cleverly.
kana	= first.	kanai-go	= once.
ngamba	= closed.	ngambai-go	= with (the eyes) closed, <i>i.e.</i> carelessly.

Adjectives in their original form are sometimes employed as adverbs, but care must then be taken that they are used in their proper (adverbial) place in the sentence, *e.g.*

bama nulu dadara = the man (he) walks.

bama dani nulu dadara = the slow man walks.

bama nulu dani dadara = the man walks slowly.

The comparatives and superlatives of adverbs are formed on identical lines as with adjectives.

28. Conjunctions.

"And," "also," "too," "more," etc., is translated by *gura* placed before its noun, or by *galmba* placed after it. [*cf.* *gura* with *guralal* = to put together], *e.g.*

milbir ngato wo-a : kalka galmba =

wommeru to-me give : spear also.

milbir gura kalka ngato wou =

wommeru and spear to-me give.

"Both," "and" = *burla*. [*See* sect. 13 (a).]

"Again" = *gura-budo*, *i.e.* and—sign of emphasis, etc.

"Or," "either," etc., is rendered by *ngoba* (= perhaps) placed after the noun, *e.g.*

kalka ngato wo-a : milbir ngoba =

spear to-me give : wommeru perhaps, *i.e.*

give me a spear or a wommeru.

wandu gura-galbai? : dirainggur ngoba kamba-kamba ngoba? =

who more-tall? : old-man perhaps old-woman perhaps? *i.e.*

who is the taller? : the old man or the old woman?

29. Prepositions.

Prepositions, or what would correspond to them in our own language, are signified in Kokoyimdir by various suffixes, separate words, etc., and may be classified according as they refer to rest, motion, purpose, or time. Rest will be considered first:—

(a) Rest in, Place.

ye-wai	= here.	nayun	} = there.
ye-wai-go	} = here, very close to.	na-wai-go	
yi-e		na-mo	
yubai-go		ye-mon	

[Note: With yubaigo, the place to which it is close must be mentioned.]

gala-galbai	} = far away, a long way off [<i>see</i> gala = fork of the leg].		
gala-kati			
gunggar	= north.	dibar	=
naka	= east.	go-a	=

[For the reduplicated forms of these cardinal points, see sect. 29 (b) (i.).]

wau-wu	= inside [the "breath"].	wa-kur	= outside.
kana	= first in place [time, and everything].		
wonda?	= where?		
wonda-l-be?	= wherein?		
wonda-we?	= "		
wanggar	= above, high up.		
bada	= under, below, used in the sense of below in Cairns, etc., as opposed to my being		

yere wanggar, i.e. up here [yere, yewai = here, wanggar = above, high up] in Cooktown.

(i.) *in, at, close to, among, on, alongside of*, etc., is expressed by -be (after a consonant) or -we (after a vowel): This is the general rule, e.g.

ngayu bayen-be ninggal = I in-the-hut sit.
nulu tjiri-we ninggal = it in-the-sky dwells.

[The suffix -en is a rare form:—

diar = hole, diaren = in a hole.
webur = crest of a hill, wobur-en = on the crest, etc.]

But after a word in the objective case, and with numerals, and certain pronominal forms [sect.

15 (b) (i.)], the -we is substituted by -me.

bayen yoku-ga = the hut for-the-wood [sect. 29 (c) (viii.)].
bayen yoku-ga-me = in the hut for-the-wood.
diraing gur bobo-nanu-me [sect. 15 (b) (i.)] = the old-man (is) at-your-place.
burnga gangga-ga = a dilly-bag for- yams [sect. 29 (c) (viii.)].
burnga gangga-ga-me = in a dilly-bag for- yams.

In the case of points of the compass, the inflexion takes the form of -le or -lu-we, e.g. goa-le or goa-lu-we = in the west.

To express the idea of continuity, the suffix -go [sect. 19] may be added:—

magar-be-go = still in the net.
bobo-we-go = " " " place.
(-goa-lu-we-go is contracted into)
goa-le-go = still in the west.

Note: The following sentence, in its two versions:—

bama-we mo-wo milka-we ninggal
mo-wo nulu milka-bama-we ninggal
= the mosquito is (sits) on the man's ear.

In the first version, emphasis is meant to be laid on the man's, which is therefore placed first and foremost in the sentence. In the second version, the "milka-bama-we" signifies strictly "man's ear" [sect. 14 (c)], and "on the man's ear" should, according to rule, be "milka-bama-we-we" to indicate the prepositional form: as a matter of fact, however, whenever these two "-we's" or "-be's" come together, one is elided.]

(ii.) *around, round about*, is translated by the verb "to enclose, shut in, surround," etc.

dirainggur-ngai dara yoku-dingal ngalbur =
the-old-men they tree-trunk surround, i.e.
the old men are (resting) around the tree.

(iii.) *between-persons or things*, is rendered by garbar (= between) and -gal.

nundu ngando-ngai-gal garbar ningganu =
you the-women between will-sit.
piri nulu mantchal-ngai-gal garbar dadara =
the-river it the-mountains between flows (goes).
goboi nulu kuman-ngato-n-gal garbar dudara =
a-lizard it my legs [sect. 15 (c) (iii.)] between is-running.

[Note: The form "galaranggur" by itself is used only when the position of rest is at the open end of any fork (= gala); e.g. lega, branches, etc. Hence the last-mentioned sentence can be quite correctly expressed as goboi nulu kuman-ngato galaranggur dudara.]

(iv.) *above, on top*. This idea is rendered by -be (after a consonant) or -we (after a vowel), with wanggar = up-above, on-top-of.

golan nulu yoku-we wanggar ninggal =
an-opossum it on-tree top sits.
mumbal = on-the-head (of people only, in the sense of carrying, etc.)
wobur-en = crest of hill-on [sect. 29 (a) (i.)]; i.e. on the top of the hill.

- (v.) *under, below, beneath (inanimate things)*. Expressed by -be (after a consonant) or -we (after a vowel) with badembar: e.g.

bor nulu pirra-we badembar una =
a-nest it leaves- under exists, i.e.

there is a nest beneath the leaves.

bada = term used in the sense of distance from home: cf. our expression "up in town" as opposed to "down in the country."

ganna = the space under something (not a person); hence, ganna-we = in the spot (place, etc.) beneath.

goda bayen-ganna-we ninggal = a-dog under-the-hut is-squatting.

ngato-burnga damar-ganna-we una = my-dilly-bag under-the-grass-shed is.

- (vi.) *under, below, beneath (animate things)*. This is translated by the verb "to cover." Hence, "The dilly-bag is beneath me" is paraphrased into "I the dilly-bag am-covering," i.e., ngayu burnga baitchar.

- (vii.) *on this side of, on other side of, in front, behind, etc.*, is usually rendered by walu = side [temples, etc.], and the particular point of the compass, either alone or with the suffix -ln-gar: e.g.

mantchal nulu una : piri nulu walu { dibar dadara = the- mountain it exists :
dibar-ln-gar

the-stream it side south flows, i.e. the stream flows on this side of the mountain [this side happening to be the south].

[Note: All directions of place are thus rendered by the cardinal points of the compass. If an individual have his hands full, so that he is prevented pointing, he would talk of a fly not being on the right or left side of his face, but on the N.S.E. or W. side. Similarly he would not speak of someone sitting, etc., at his back or side, but on his N.S.E. or West. Again, if on the walk-about, he saw his mate about to tread upon a snake, etc., he would call to him to jump to N.S.E. or W. Even the little children express themselves on these lines, and very wonderful it is to see how correct they are considering the changes of position continually assumed. On the other hand, they do possess the word malla-budon = right hand or right foot as distinguished from daku = left hand or left foot: neither of these terms, however, are used to express position.

in front of, so far as it relates to the situation of the particular individual, etc. (whose front is referred to), is sometimes rendered by dagalbai or dauaigo. See sect. 29 (d), (iii.) The corresponding term for *behind*, goror, is used only in motion. See sect. 29 (b), (viii.).

ganguru burla yoku : ganguru dagalbai ninggal = the-kangaroo and the-tree: the-kangaroo in-front is (sits), i.e. the kangaroo is looking at the tree in front of him, although he may be on the further side of the tree from me. But were I to say ganguru burla yoku : ganguru nulu ngondu ninggal = the-kangaroo and the-tree: the-kangaroo it { hither is (sits), i.e. this { towards me

would mean that whether the kangaroo is looking at the tree or not, the kangaroo is in front, between me and the tree.]

(b) Motion.

- (i.) *to, in, into, at* = -ga.

nulu bayen-ga dudara = he to-the-hut is running.

ngayu kalka ngando-warra-ga dambar =

I a-spear at-the-bad-woman am-throwing.

ngando nulu kalka ngantanun-ga dambar =

the-woman she a-spear at-us is-throwing.

hither, thither, are expressed by the points of the compass, but hither when signifying towards me or us = ngondu. So again, baru-ngondu = lap-hither, i.e. towards me (the person speaking). *Whither?* = Wonda-l-ga?

There is a peculiarity alone with the four cardinal points of the compass: e.g. the -ga is replaced by -lu.

ngantan gunggar-lu dadanu = we to-the-north will go.

Furthermore, there is another form of motion, described by reduplicating, or adding -lnggar to, the terms applied to the cardinal points: thus—

gunggar-gunggar or gunggarlnggar = a man, etc., North of me, but moving W. to E., or E. to W.

dibar-dibar or dibarlnggar = a man, etc., South of me, but moving W. to E., or E. to W.

goa-goa or goarlnggar = in same way, West of me, but moving N. to S., or S. to N.

naka-naka or nakarlnggar = in same way, East of me, but moving N. to S., or S. to N.

Independently of any prepositional suffix, each cardinal point can be used with baru (=lap) to signify motion in that particular direction, e.g. baru-dibar = lap to south, in a southerly direction. [cf. our expressions "southern frontage," "northern aspect," etc.]

- (ii.) *from, person or place: their direction or neighbourhood*. -ngan or -ngo-al.

yemon = there, yemo-ngan = thence.

namo = there, namo-ngan = thence [refers also to time and reason].

ngantan bayen { -ngan dadara = we from-the-hut are-going.
-ngo-al

nundu kabir { -ngo-al ngondu kadai = you from-the-girl hither came.
-ngan

ngantan ngando-warra { -ngo-al dadanu = we from-the-neighbourhood-of-a-bad-
-ngan woman will-go-away.

bama burla dedar { -ngo-al kadai = both-the men from-the-neighbourhood-
-ngan of-Dedar came.

[Dedar = Cape Bedford.]

nundu kalka yoku { -ngo-al bandil = you a-spear from-a-tree are-cutting.
-ngan

There is a peculiarity alone with the four cardinal points of the compass in that the -ngoal or -ngan is replaced by -mun:—

nulu gunggar-mun kadai = he from-the-north came,

- (iii.) *Across, over*, an object (mountain, creek, etc.) is expressed by "going" or "jumping" onto its (other) side, this side being particularised according as it is N.S.E. or W. Grammatically, the aborigines will only "jump" a creek: they can both "go" and "jump" over a mountain. The word for "side" is *wa-lu*, a term signifying the temples:—

dana mantchal-warka walu-gunggar { garnbar-nu.
dada-nu.
they the-mountain-big the (other) side-north { will jump
will go, i.e.

they will go across the big mountain (the direction of the crossing being dependent on the cardinal point).

- (iv.) *After, for, on the look-out for, to hunt*, translated either by -ga, or the verb *wogurgur* = to collect, gather, hunt, etc.

peba-nanu nulu buriwe wogurgur =
thy father he emu is-hunting.

ngantan kadagai-ga dadanu =

we after-(our)-(moveable)-possessions will-go, i.e.

we will go and fetch our things.

- (v.) *around, round about, hither and thither, to and fro*, is expressed by *walli*, or *walli-walli*, with -ga suffixed to that which is gone around.

peba-ngato nulu bayen-ga walli dudara =
my-father he the-hut-round is running.

Again, note the following:—

yitartchir = to put (something) down.

walli yitartchir = to put (it) here and there.

wolmbalmbal = to roll

walli wolmbalmbal = to roll (it) over, here and there.

- (vi.) *Among, up, through, alongside of*. Rendered by -we (after a vowel), -be after a consonant. Golan nulu yoku-pinta-we mabelbil = an-opossum (he) among-the-tree-branches is-climbing. Kalka dirainggur-be tjiri-we dudara = the-spear of-the-old-man through-the-sky (runs i.e.) flies.

[Note: Waraigo = motion through, and hence, in the last sentence, we could say quite correctly, instead of "tjiri-we," "wanggar-waraigo" where "wanggar" = up above, on top of (sect. 29 (a) (iv.).]

- (vii.) *In company with, things or persons*. Translated thus:—

- A. If the person or thing that he goes in company with is the individual's own lawful property, e.g. his own wife, spear, dog, etc. = -tchir (after a consonant), -dir (after a vowel).

bama nulu diral-tchir dadara =
the-man (he) with-(his) wife departs.

nulu kalka-dir dadanu = he with-spear will-go, i.e. he will depart, taking his (own) spear with him.

- B. If the person or thing, etc., has no connection with him, this individual being independent of them, = -n-gal (after a vowel), -gal (after a consonant).

ngayu danangan-gal dadara = I them-with am-going, i.e. they would be going whether I went with them or not.

ngayu yabagar-ngato-n-gal dadanu = I with-my-brothers will-go, i.e. they will be going in any case.

- (viii.) *behind, in front*. Both things moving, one being behind the other. behind = *gorer*, in front = *dagalbai*, *dau-aigo*.

bama godera dibar-dibar kadara: yendu dagalbai (or dau-aigo), yendu goror =
men two in-the-south (etc.) are-going: the-one in-front, the-other behind.

- (c.) **Purpose. Reason. Means.**

- (i.) *to (donation)*. Rendered by -be (after a consonant) or -we (after a vowel). [cf. sect. 15 (c) B (v.)].

peba-ngato nulu dirainggur-be kalka uma =
father-my he old man - to a spear gives.

Note the position in the sentence of the person, etc., to whom the article is donated, because

peba-ngato nulu kalka dirainggur-be uma =
father-my he the spear old man's gives, i.e.
my father gives the old man's spear [to somebody, etc.].

ngamu-ngato nulu kabir-be burnga wudinu =
my-mother she to-the-girl a dilly-bag will-give.

- (ii.) *from, obtained or received; person or place*. Expressed by -ga [cf. sect. 15 (c) B (ii.)].

ngayu dirainggur-ga kalka mane =
I from the old man a spear brought.

Note again, as in preceding paragraph, the position of the words in the sentence, because

ngayu kalka dirainggur-ga mane =
I the-spear of-the-old-man brought, etc.

- (iii.) *for, on account of, advantage or disadvantage.* This is translated by -ngu [cf. sect. 15 (c) B (iv.)].

golan-ngu ngayu munu mandenu
for-the-opossum I grass will-bring.
kalka-ngu mamba ngato wo-a =
for-a-spear fat to-me bring (i.e. to grease it with).
matji-ngu ngantan gari dadanu =
on-account-of-the-rain we not will-go.

Note in these three sentences the position of the word it is wished to emphasise—i.e., foremost in the expression.

- (iv.) *for (bargaining, swapping, exchanging) something for something.* Rendered by -ngu [see preceding paragraph] and dirlen (= in return, exchange). Thus, "Swap your wommera for my spear," becomes "For-a-spear to-me in-exchange a-wommera give," which, according to the particular person or thing it is wished to emphasise, may be translated

{ kalka-ngu ngato dirlen milbir woa.
ngato kalka-ngu dirlen milbir woa.
kalka-ngu dirlen milbir ngato woa.

Again:—

kamba-kamba-we burnga-ngu dirainggur nulu dirlen magar uma = (literally)
to-the-old-woman for-a-dilly-bag the-old-man he in-exchange a net gives,
i.e. The old man exchanges with the old woman a dilly-bag for a net.

- (v.) *for manufacturing, constructing, or building, -ngu.*

yoku kalka-ngu mara = wood for-a-spear (i.e. to make it with) bring.

The same idea can also be expressed with the future tense of the verb: thus

kalka balka-nu yoku mara = a-spear to-make-it (future tense) wood bring.

- (vi.) *with, by, through, agency of, etc.* Various suffixes are used to denote this, but the why or wherefore of their use I have not been able to discover.

-l bama-l = (killed) by a man.
-ngun wandi-ngun = " by an eagle-hawk.
-ngoal purai-kaka-ngoyal = through-the-effects-of bad water (i.e. grog).
-n yoku-n = (struck) with a stick.
-nda gimil-nda = " " " "
-dir daba-dir = " " " "
-il gumbin-il = (tied) with a string.
-tchir gumbin-tchir = " " " "
-en dogar-en = (covered) with sand.

yerka nulu dakai gimil-nda kundai =
the-boy he an-iguana with-a stick struck.

ngando-ngai dana ngundar dogar-en baitcharen =
the-women they the-plums with-sand covered.

kadagai gumbil-tchir kadala =
the-things (moveable possessions) with-a-rope tie-up.

kabir nulu milwaril: purai-kaka-ngoyal =
girl she eyes-fly about: through-effects-of bad water, i.e.

the girl is drunk with grog.

- (vii.) *without agency of, etc.* This is expressed by -mul.

koko-mul = voice-without, i.e. speechless, silent.

milka-mul = ears " " foolish, silly.

pinal-mul = clever " " ignorant.

nadel-mul = seen " " ignorant, unknown, etc.

[Note that -mul can be suffixed to all verbs in the present or past tense, but if so used the word "ngudo" must be prefixed. e.g. ngudo ninggal-mul. Ngudo = play, recreation, etc., but when thus used with a verb has apparently no meaning now attached to it. Sect. 21 (a).]

- (viii.) *for holding or containing.* Translated by -ga.

burnga gangga-ga = a dilly-bag for-yams, i.e. for carrying them in.

bayen yoku-ga = the hut for-(holding) wood, i.e. a wood-house.

bayen yoku = the hut wooden [Note the adjectival position after the noun], i.e. the wooden hut.

- (viii.) *for some definite or special purpose.* Rendered by -malen.

goda ganguru-malen = a dog for-kangaroos—for hunting them specially, i.e. a kangaroo-dog.

goda bayen-malen = a dog for-the-house,—for guarding it, etc., i.e. a watch-dog

(d) Time.

- (i.) There are no prepositions signifying specially *time duration, how long*. Short spaces of time are rendered by the number of nights slept. If beyond three nights—the limit to which the aboriginal here can count—and he particularly wished to express their number, he would count on his fingers, saying at the same time "I slept one, I slept one," etc., etc. Longer spaces of time are reckoned by moons. A year is measured by the wet season, the time when the dew falls (i.e. the dry season), when this or that fruit was ripe, etc. Beyond a year or two, time is measured somewhat like this: "When I or so-and-so (any person known to us) was a child so big," suiting at the same time the action—of the hand at a certain level—to the word.

(ii.) *time when.*

A day is measured up as follows:—

dingal-bauwal	= mainland—to light a fire, <i>i.e.</i> the glow before the sun rises, and so, daybreak.
ngalan-walmalma	= sun-rises, <i>i.e.</i> sun-rise.
daba-dabaigo	= from sunrise up to
ngalan-wanggar-budon	= sun-high-est, <i>i.e.</i> mid-day.
ngalan-ngurku	= sun-darkness, <i>i.e.</i> from mid-day to the time the sun commences to set.
ngalan-puleli	= sun-fallen down, <i>i.e.</i> sun-set.
tjirai	= twi-light [<i>cf.</i> tjiri = sky].
wudur	= darkness.
wudur-be	= in, amongst, the darkness, <i>i.e.</i> night.
ngalan-be	= sun-rest in, <i>i.e.</i> day-time, while there is sun, as compared with night.
melu	= (shadow), a day independently of any night.

As compared with this present day, *i.e.* to-day, I find the following forms:—

ngor-goigo = yesterday.

n.-bada [see sect. 29 (a)] = the day before yesterday.

kanaigo = at any time in the past, *i.e.* before the day-before-yesterday. Once, originally.

dabaigo = to-morrow.

d.-bada [see sect. 29 (a)] = the day after to-morrow.

garko = at any time in the future, *i.e.* after the day after-to-morrow, by and by.

g.-bada [see sect. 29 (a)] = in the very far distant future.

Independently of any day or part of a day are to be found the terms:—

ngan-go = now, soon.

ngan-goigo = quickly.

ni-la = now, soon. [*Note:* nila daba-dabaigo = now in-the-morning, *i.e.* this morning.]

nila nila = immediately.

pitaigo = in a little while.

ngal-gon	} = then, particular time, present, past, or future, depending upon the context of the sentence.
ngal-gon-be	
namo namo	

netchin = always, as a regular habit, *e.g.* tide rising.

mako-badaigo = always, as a continuous habit, *e.g.* tree growing.

gari-budon = not—emphasis, etc., *i.e.* never.

The expressions “*When?*” “*How soon?*” are not translatable directly, but by periphrasis: *i.e.* by nila? garko? or kanaigo? according as the time referred to is respectively present, future, or past.

(Examples.)

ngalan-puleli ngalgonbe ngali wametinu =
sun - set then-at-that-time we-two will-meet, *i.e.*

We will meet when the sun goes down.

keda nobun-go ngayu yewaigo ningganu =
moon one-only I here will-sit, *i.e.*

I shall stay here for a month only.

keda godera garko nundu ngondu kadanu =
moon two by-and-by you hither (to us) will-come, *i.e.*

You will come back in two months' time.

ngorgoigo-bada ngali wame-ti =
the-day-before-yesterday we-both met, *i.e.*

We met on the road—he came to meet me.

ngorgoigo-bada ngayu nangu wa-mi =
the-day-before-yesterday I him met, *i.e.*

I went to meet him—he did not come to meet me.

dudan-go ngayu wudur nobun-go barbi =
on-the-road I night one-only slept, *i.e.*

I slept but one night on the road, or (as we Europeans might express it) I journeyed for two days.

[*Note:* Similarly, “We returned three days ago” is translated somewhat as follows:—“We came back: we slept here two nights.”]

(iii.) *time, after or since.*

namo-ngan = thence, from that time onwards.

kana = first in time, independently of what is afterwards.

dau-aigo	} = first in time, before, as contrasted with what comes afterwards.
dagalbai	

gorer = afterwards (as contrasted with preceding).

dagalbai-bada [see sect. 29 (a)] = a long time ago.

mayi dau-aigo pudanu: purai gorer =
food first will-eat: water afterwards, *i.e.*

I will eat before I drink.

dagalbai ganguru nulu ngani dabi: gorer ngayu dakadi =
first-of-all kangaroo he me kicked: afterwards I sat-down, *i.e.*

After the kangaroo kicked me, I sat down.

30. Interrogation, Doubt, Uncertainty.

Interrogation is most usually expressed by the general tone and accentuation in which the sentence is spoken.

-ba? added to a sentence, makes a query of it.

ngai? } = "you don't mean it, you don't say so, etc., do you?"

yai? } = why?

nganni? = on what, at what (place or purpose).

wondara? = how? e.g. wondara-galbai? = how tall? wondara-walal? = how wide?

[For other interrogatives already detailed, see sect. 18; sect. 29 (a), (b), (d) (ii.), etc.]

31. Composition.

As specimens of native composition I am including here various extracts taken from letters written to me within the last three years by Magdalen Mulun, one of the young aboriginal women belonging to the Cape Bedford Mission Station. Without any assistance or help, these were transcribed just as the fancy took her.

A.—On My First Visit to the Mission Station—(2nd April, 1898).

Ngantan karbun-manati nundu ngantanun-gal kadai-ga gura nundu ngantanun dauun-tchir
We happy-were you us-amongst came and you us friend-ly
natechi. Gura detchul-tchir ninggai gura koko-dir ngangoigo ngantanun dawa-ngati. Dauun-budo-n-go
looked-at. Also smile-with sat-down and speech-with quickly us called. Friend-real-only
nundu ngantanun ninggal. Namongu ngantan dirlen nanu gari milka-ngandaya gura nina milka-nama.
you to us (sit-down) are. Therefore we in-return you not (with) ears-refuse but you (with) ears-see.
Dauun ngantan nanu merelil, wanger yendu ngantan yimidar ngudo nadel-mul-go Gura
Friend of-us you (we) say, white-man another we similar [sect. 29 (c) (vii.)] seen-without-only. And
ngantanun-gal budur kundo barbega, gura nundu ngantanun ngudo-ngu mereli-nga. Dirlen galmba
us-amongst nights three stayed, and you us games-for shewed. In-return also
ngantan nanu kapan mangal-be-go merelin. Nundu garko gura-budo kadanu bera. Namo
we you cat's-cradle hands-on-only shewed. You by-and-by again will-come certainly. By that time
ngoba nundu koko ngantanun nama.
perhaps you speech of ours see.

Translation.—We were pleased that you came to stay with us, and treated us in a friendly way. You also had a smile for us, and called us up quickly to have a talk with you. You are indeed a friend. We therefore in-return cannot (may not) forget you, but bear you in mind. We say you are our friend, and do not know another white-man like you. You spent three nights with us and shewed us games. So in return we shewed you (how to play) 'cat's cradle' with the hands. You will of course come again by-and-by (won't you?). By that time you will perhaps understand our language.

B.—About some Plait-work.

Nundu ngana-ngan gumbin yendu degai gura yiwat-en. Yura galmba yimidar wogur? Gura
You us-to (plait-)string another sent and asked You also the-same plait? And
nganni wogur? Ngantan kabir-kabir-go yimidar ngudo wogur-mul. Yerka-ngai wogur-gur bera.
why plait? We girls-only the-same [sect. 29 (c) (vii.)] plait-without. Boys plait certainly.
Dana galmba murga ngudo-ngu wogur-gur. Kanaigo nanu burlnggar buntjil degai. Nundu
They but only play-for plait. Some-time-ago to-you mourning-string broken-piece sent. You
wiyaren, wandu yimidar birbal gura wundara birbal? Na! diranggur gura ngando-ngai birbal
asked, who the-same puts-on and how put-on? Now listen! men and women wear (it)
duyu-ngu. Wuren-go ngaku-we gura gamur-be bamal yimidar birbalbal. Yendu nila banbar-go nanu
dead-for. Cross-ways shoulder-on and armpit-on man-by the-same put-on. Another now whole to-you
degal. Nundu ngana-ngan dirlen gari gura wamil.
send. You us-to in-return no more go-to-meet.

Translation.—You sent us another (kind of) plaited-string, and asked whether we plaited like it, and why we did so. (In reply) we girls don't plait like that. But the boys do. Though they only do it for amusement. Some time ago I forwarded you a broken-piece of mourning-string. You enquired as to who wears it and as to how it is worn. Now listen! Men and women wear it on-account-of the dead. Men put it on cross-ways, (from) over the shoulder (to) under the arm-pit (I) am sending you another (mourning-string) now, a complete one. In-return, are you coming to visit us no more?

C.—Concerning the Cyclone of March, 1899.

[Extract from a letter addressed to Mr. Parry-Okeden, Commissioner of Police.]

Nila-nila dan-gai warka yewaigo kadai. Bayen-ngai ngantanun mundal dumbi gura dambar-en.
Just-now S.E. wind big here came. Huts of-ours some broke and threw down.
Mayi-banana dingal-ngai galmba dumbi, durbu-ngai murga unana. Yulal ngantanun bodan unanai.
Food-banana stalks also broke young-shoots only exist. Boat of ours good was
Ngantan mina warka mane bera. Nila yulal mokul, moku buntjil, ngantan money-mul, yulal wondara
We flesh-food big caught certainly. Now boat old, back broken, we money-without, boat how

mande-nda? Nundu bama *Queen*-be koko-balka-nda ngantanum yulal ngoba wudi-nda. Dau-uri should-obtain? You men of-the-Queen if-speech-were-to-make to us boat perhaps would-give. Friend ngantanun *Dr. Roth* nila ngantanun galmba wami, nulu koko ngantanun mane-nangu-ngal of-ours *Dr. Roth* now us also has-come-to-meet, he speech of-ours is-learning-him-by budo ngantan kapan degal. Ngantan nila yulal-tchir nanu wanger yoku bodu-dir deganu. indeed we mark, cut etc. send. We soon boat-with to-you button-orchid tree tea-tree-with will-send. Dana warka-ngamu ngani detchur-en koko yimidir nanu balka-nu. They altogether me ordered speech like-this to-you to make.

Translation.—A big south-east storm has just passed over here. It broke some of our huts and threw them down. It also destroyed the banana-stalks, leaving only the young shoots. Our boat used to be a good one. We certainly caught a large quantity of food with it. Now that the boat is old, and has its bottom broken, and we are without money, how should we obtain a new one? If you were to talk to the men of the Queen [*i.e.* Parliament] they would perhaps give us a boat. Our friend *Dr. Roth* has now come to pay us a visit. He is learning our language. By him I am sending this (mark etc. *i.e.*) letter. We will soon send you by boat a button-orchid with tea-tree (attached.) (They *i.e.*) the other girls have instructed me to talk like this to you.

D. On Marriage and On Burial.

Bama-ngai merinu dana diral mandendi. Gura dana diral mandenu dana-ngan yerbaigo
Men will-tell they wife take. And they wife about-to-take to-them willingly
dauun-tchir-go gari uma. Ngamu burla peba kambogo yerka-we kana kundanu: gorer nangu
with friendliness not give. Mother and father head young-man-of first will-strike: Afterwards to-him
diral dubil garibi-dir-be. Diral wutiga nulu bayen dagelgil yoku bau-wal. Kabir ngangoigo nangu
wife bequeath to-the-one-with-blood. Wife given she hut builds wood-lights. Girl quickly him
gari wamil. Ngamu burla peba-ngan kana deganu: garko wamil. Gura ngalan-be nangu-ngal
not meets. Mother and father-by first-of-all about-to-send: afterwards meets. Also daytime-in him-with
melu-we [ngudo] ninggal-mul. Ngamu-gal-go netchin ninggal. Namo-dir kabir-go ma. Bama diral
shade in sits not. Mother-with- always sits. Thus girl indeed. Man wife
nangu detchuren budo ngamu nangu-mun duno ngudor nangu-me ngudo wamel-mul
to-him agreed for-good-and-all mother hers-of husband daughter hers-of [sect. 29 (c) (vii.)] meets not
gammi bemor galmba: dana biene-gamu. Gura duno nangu bieni-nda nulu unggu
mother's mother father's younger sister also: they die-might. And husband her die-should she a-cry
batchetchil gura gamai kambogo-we durnggal gura gumbin kundo-kundo manu-we yitar gamur-be
cries and white-clay head-on smears and string many throat-round places armpit-in
galmba yirngal. Gura duyu-gal ninggal-budo ngamu burla diral, ngamu yerka-we ma. Gura
also winds. And corpse-by sit -verily mother and wife, mother young-man-of indeed. And
yoku-bauwal: ngalgal-nda dabaga ngara-dindanu — duyu kada gurai-gamu. Ngando duno bieni-ga,
wood light: smoke-with flies will hunt away — corpse foul make-might. Woman husband has-died
nulu wudur nobun-go barbil: garko dirainggur-be kambogo walli wudai-ya: dana milbir-en
she night one-only sleeps: then old-men -to head roundabout offers: they wommera-with
kundandal. Garibi warka natega, dana nangu gari gura kuli-dir. Bama yendu yiwar-nda. "Dana
strike. Blood much seen, they her not more angry-with. Man another ask-should. "They
nganni dirlen ngando-ngai kundal?" Dana yerba gura-nda: dauaigo-bada gilgi matega kabir
why therefore women strike?" They so say-would: a-long-time-ago jealous became, girl
yendu-ngu, nangu murega-budo, mina nangun-ga pudai-ga galmba. Gura dana duyu-ngu
another-on account of, to him forbade-indeed, food his-of ate also. Also they corpse-on account o
moari ngangoigo gari wokil: duyu kana mokul manatinu. Diral ngangoigo galmba gari mana. Gura
hair quick not out corpse first old will become. Wife quick also not takes. And
dana diral mandenu dana ngambai-go gari mandenu. Ngamu burla peba gura dauun-ngai kana nama,
they wife will take they in-a-careless-way not will take. Mother and father and friends first seen,
dana kadagai kana bauwanu, kalka-ngai dumbinu, gura dana moari warka-ngamu wokelkil.
they moveable-possessions first will burn, spears will break, and they hair altogether out.
[Duyu gurlnggo-dir-be-go bera. Moari duyu galmba gumbin guralal.] Garko duyu mumbal yitar
[Corpse bark-trough-with-in certainly. Hair corpse also string make.] Then corpse on-head places
gura dindal dudara wauun-gun nangu dirbalbal-budo. Kanaigo nangu kundandai, duyu nawaigo-budo
and quick runs spirit-by him runs away with. Once him killed, corpse there-indeed
pulelil. Gura dana gimil nama, tamal dambun-tchir galmba. Gura namongan-go mala guralal,
falls. And they stick see, footprints "murderer"-with also. And thence guilty-one say,
gura kuli manaya-budo. Yerba-budo dana ngando-ngai-be wanga gural. Namodir manu dirainggur
and angered become-very. Thus-indeed they woman-to lie tell. Thus only old-man
pinalen-go balkal. Bama bienega kadagai bama yendu-me ngudo wudel-mul: murga
cleverly makes. Man has died moveable-possessions man another-to [sect. 29 (c) vii.] are-given-not: only
gammi-we ngadi-we dowi-be umalma: gammi ngando-we gari. Gura
mother-in-law's mother's brother-to mother's father-to mother's son-of are given: mother's mother wife -of not. And
ngando-ngai bienega, yimidir-yimidir ninggal. Gura danangan gurlnggo-dir guralal galmba
women have died, exactly-the-same is. And them-for bark trough-with make also
Kambakamba-budo-ngo gari: danangan dubil-budo: dirainggur gimil galmba gari yiwar: murga bama
Old women-very-for not: them leave behind: old-man stick also not looks for: only man

yendu mālā gural-budo Gura diral danangan bienega, danangan kambogo [ngudo] kundal-mul :
 another guilty-one call. And wife their has died, their head strike-not :
 murga kalka-n kuman damal : warka-ngamu gari : godera-mun : yendu nobun-il. Kambakamba-ngu
 only spear-with leg throw-at : all together not : two-by : another one-by. Old woman-for
 [ngudo] damal-mul : dirainggur-ga [ngudo] kundal-mul.
 throw -not : old man-for strike-not.

Translation.—(I) will tell you about men taking a wife. When men want a wife, (the parents) do not give her to them willingly or with kindly feelings. Both mother and father strike the young man's head first : when he is covered with blood, they give her to him. Once given to him, the wife builds the hut and lights the fire. But the girl does not readily go to meet her husband : Her mother and father have to send her before she will go : then she meets him. Furthermore, during the day-time she will not sit alongside him in the shade. She is always with her mother. So much for the bride. When once the wife is engaged to her husband for-good-and-all, the mother does not see her son-in-law, nor his mother's-mother nor his father's younger sister : they might die (if she did). Should her husband die, she does a cry, smears white-clay on her head, and puts many strings round her throat and (these) she winds round her arm-pits. And alongside the corpse there they sit, both wife and mother, that is, the young man's mother. (There) they light a fire : with the smoke they will hunt the flies away—they might make the body foul (if they didn't). On the death of her husband, the wife has only one night's rest before she offers her head to be struck with a wommera by all the old men round about. As soon as much blood is seen, they are no longer angry with her. Supposing another man were to ask "But what reason have they for hitting the woman?" the (old men) would say somewhat as follows : "From the very first, she was jealous on account of another girl, and forbade him (to have her), and she also ate his food (which otherwise we would have had)." Again, on account of the corpse, they do not cut their hair for some time : the body has to get old first. Further, the wife does not take (a husband again) in a hurry. So also when they are about to marry her, they do not do it in a slovenly manner. The mother, father, and friends are first interviewed, and the (deceased's) moveable-possessions burnt, and his spears broken, and the hair of all of them cut. [The corpse is of course in its bark-trough, and they also make its hair into string] Then (some one) places the corpse on his head, and running quickly is led on by the spirit (of the deceased). (Where) originally the (deceased) was killed, there on-that-very-spot the body falls. And they see the stick (which killed him) as well as the 'murderer's' foot-prints. By this means they recognise the guilty one, and become very angry (with him). Lies like this they tell the women (who believe them). But this is what the old men alone pretend to understand about it. When a man dies, his moveable-possessions are not given to another man, except (some) to his [i.e., the son's] mother-in-law's mother's brother and to his mother's father : his wife's mother's mother (gets) nothing. When women die, exactly the same thing takes place ; and bark-troughs are also made for them. But for very old women, they don't do this : nor (in their case) do the old men look for the stick : they just accuse some-one-else of being guilty. When the wives die, they do not strike the husbands' heads : they only throw a spear at his legs : (even then) they don't all of them have a throw (at the widower's legs) : (probably only thrown) by two (of them) : on-other-occasions (perhaps) only by one (of them). Spears are not thrown (at the widowers) for old-women : nor are the (widows') heads struck (if their husbands were) old men.

E.—On certain Vegetable Foods.

Mayi-ngai katil merelil. Bambir nayun yoku-ngoal mandendi : dana daba pita-dir mabelbil
 Vegetable foods names tell. Mangrove-seed there trees-from take they sticks little-with climb
 gura pirra-we kundandal warka-ngamu puleli. Dana dagaya gura burnga-we birbalbal gura mumbal
 and leaves-on beat all together fall-down. They descend and dilly bag-in collect and on-the-head
 mandendi. Gura mayi namodir yoku-ngoal-go badatega, dana gura-budo yual-ngan birbalbal dan-gai-il
 carry. And food thus trees-from finished, they again beach-from collect wind-by
 dambaren-ga. Nayun mayi nulu-nulu-go bambir. [Dana yendu gura-budo yual-ngan mayi yendu
 thrown. There food it-itself-indeed mangrove-seed. They others again beach-from food other
 mandendi : diremandi, yurlnga, balandal, gura dumin ngurlaga gura.] Bambir ngangoigo gari
 bring : cocoa-nut, match-box bean, Careya sp. and Terminalia sp. Pandanus also. Mangrove-seed at-once not
 pudal. Wambo-me kana kobarbelbil gura bodun baitchartchir : garko gura-budo bobo duna-n
 eat. Ashes-in first bury and tea-tea bark-with cover then again earth wet-with
 baitchartchir gura dana pitaigo bantchenchi, kana yatjega, dana nambal-be kundandal. Garko berla-we
 cover and they a-little-while waited, enough roasted, they stones-with strike. By and by palm-trough in
 dirmalmal gura bobo dabadaba yitar walu dunggalu, gura dirnbur nawaigo bobo-we yitar gulbu nenggurnu.
 knead and earth large place like basin, and dilly-bag there ground-on place pulp will empty out.
 Badatega wornda dambar budo gura gulbu bodan-go ngangoigo gari badaya, purai bindo-n dogelgil-budo,
 Finished empty thrown away and pulp good quick not taste, water fresh-with sluice,
 garko kana bindo manatega. Gura-budo purai yendu kaka mandendi gura gulbu-we nenggungur.
 then first sweet becomes. Again water other salt bring and pulp-on empty.
 Namodir manu ngando-ngai mandendi. Gura-budo mayi-ngai katil meril. Bobo daiyinggal-be bera
 Thus only women take. Again foods names tell. Ground dry-in indeed
 wogai gura badur. Wogai bobo-ngoal mandendi : badur yoku-ngoal bera. Badur galmba
 Dioscorea and Zamia nut. Dioscorea ground-from take : Zamia nut tree-from indeed. Zamia nut also
 kobarbelbil yimider bambir : wogai galmba yimi-yimider. Badur-be ngara dambar gura
 bury like mangrove seed : Dioscorea also exactly alike. Zamia-nut of skin throw away and
 mil nambal-nda kundandal. Gura purai-we burnga-dir-go yitar budur burla godera burla godera nulu
 kernel stone-with strike. And water-in dilly-bag-with place night both two both two it
 nobun barbil. Purai bindo-we bera. Yendu yangga yoku-ngoal galmba, gura birla-we dirmalmal
 one sleep. Water fresh-in indeed. Another green-ant tree-from also, and leaf-trough-in knead

gura baitchin-da pudaral. Yendu punga yoku pita bobo-we, moari nangu walu gorlo, gura
 and mop-with eat. Another grass-tree tree small ground-in, hair of it like sea-urchin, and
 wauu-ga mayi pudaral: gayal-go mundal bau-wal. Dana-dana-go ngando-ngai mandendi: dirainggur
 inside-from food eat: unripe-yet some cook. They [emphatic] women gather: old man
 galmba pitaigo mande.
 also little gather.

Translation.—(I am) telling (you) about vegetable foods, and their names. The mangrove seeds that they get from trees: they climb up with little sticks and beating on the leaves, the (seed) falls down all in a heap. They come down—and collecting them in dilly-bags take them (away) on their heads. When the food is thus cleared from off the trees, they still gather it along the beach where it has been thrown by the wind. That is exactly the same kind of mangrove seed. [On other occasions they get other foods from the beach: (such as) cocoa-nut, matchbox-bean, Careya-nut, Terminalia nut, as well as Breadfruit.] They don't eat the mangrove seed at once. But first of all they bury it in ashes, then cover it with tea-tree bark, and then with wet earth: after having waited a little while, and roasted it enough, they pound it with stones. By and by they knead it in a palm-trough, and place earth in a heap like a basin, and placing their dilly-bags there on the ground, empty out the pulp. (When this is) finished, and the empty (skins) thrown away, they do not yet awhile taste the good pulp, (but) sluice it with fresh water, when for the first time it becomes sweet. They now bring some more water, but salty, and empty it onto the pulp. Only the women collect it in this manner. (I'll) tell (you) the names of some more foods. Dioscorea and Zamia is got from dry ground: the former from the earth, the latter from trees of course. They also bury the Zamia like the mangrove: with the Dioscorea (the process is) exactly similar. They throw away the shells of the Zamia-nuts and pound the kernels with stones. Furthermore, they put it in dilly-bags into the water (where) it remains five nights. It is put in fresh-water of course. Another (food) is the green-ant: they also get them from trees, knead them in a leaf-trough and eat them with a mop. Another (food) is the grass-tree, a small tree in the ground, with hair [*i.e.* the thin leaves] like a sea-urchin, whence they eat the food from the inside: if it is unripe some (people) cook it. But it is the women who collect it: the old men get a little.

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FOOD: ITS SEARCH, CAPTURE, AND
PREPARATION.

BY

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PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND.

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PREFACE.

THE identification of my botanical specimens, compiled in the list of edible plants (sect. 9), has been very kindly carried out for me by the Colonial and Assistant Colonial Botanists—Messrs. F. M. and J. F. Bailey, respectively. It can have been no light task for these gentlemen to have examined and reported on something like 400 plants which I found applied to different economic uses amongst the North Queensland aborigines. Mr. R. Hislop, late of Wyalla, Bloomfield River, the Messrs. Brooke, of Brooklands, Tully River, the Revs. N. Hey, of Mapoon, Batavia River, W. Poland, of Cape Bedford, and Mrs. Gribble, late of Yarrabah, Cape Grafton, have all rendered me great assistance, both in collecting the local floras and gathering much useful information concerning them.

The molluscs (sect. 14) have similarly been identified by Mr. C. Hedley, Conchologist to the Australian Museum, Sydney. I am much indebted for the advice and help received from him.

The following are the abbreviations used throughout this Bulletin :—

Ath.	=	Atherton.	B's H.	=	Butcher's Hill (Boggy Creek).
Bld.	=	Bloomfield River.	C.Gr.	=	Cape Grafton.
C. Bd.	=	Cape Bedford.	Penn. R.	=	Pennefather (Coen) River.
Ckn.	=	Cooktown.			
KYE	=	Koko-yellanji blacks to be found at ...	B's H. Bld.		
KMI	=	Koko-minni " " ...	(Middle) Palmer River.		
KUN	=	Kundara " " ...	Coast between mouths of Staaten and Nassau Rivers.		
KYI	=	Koko-yimidir " " ...	Ckn., C. Bd., etc.		
KRA	=	Koko-rarmul	} blacks " ...	Hinterland and coast of Princess Charlotte Bay.	
KWA	=	Koko-wara			
KLA	=	Koko-lama-lama			
KUG	=	Kungganji " " ...	C. Gr.		
NGG	=	Nggerikudi " " ...	Pennefather and Batavia Rivers.		
NGI	=	Ngaikungo	} " " ...	Atherton, etc.	
NGA	=	Ngatchan			
CHI	=	Chirpal			
MAL	=	Mallanpara " " ...	(Lower) Tully River Scrubs.		
MIT	=	Maitakudi " " ...	Cloncurry.		
PPT	=	Pitta-Pitta " " ...	Boulia.		

To render it the more complete, I have freely drawn on extracts from a previous work of mine, the "Ethnological Studies," etc.

WALTER E. ROTH.

Cooktown, 1st September, 1901.

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FOOD: ITS SEARCH, CAPTURE, AND PREPARATION.

1. Meals.—Except perhaps of an evening, meals are not as a rule partaken of at any definite stated times. There is no fixed meal in the morning, unless something is left over from the night before. Food may be prepared, cooked, and eaten wherever it is caught out in the open, though it is usually brought back to camp where, about sundown, the main meal is eaten.

In the matter of dining, in some cases it is customary for certain of the females to take their meals apart; in others, it is obligatory on particular males to do so. On the Bloomfield River, men, boys, and girls (up to four or five years of age) dine together: all the other females, without distinction of any sort, mess apart. At Cape Bedford, the members of one family take their meals together, except the single young men (above puberty) who dine apart. On the lower Tully River each family dines by itself: the unmarried men will mix with the others at meals, and each will help himself, although he may have had no hand in the capture of that of which he is taking a share: men and women eat together with certain limitations, squatting down just as the fancy takes them. The limitations referred to here, and applicable elsewhere, are dependent upon the different rules of "Tabu"—e.g., a man not being allowed to sit with his mother-in-law—which will be discussed in due course.

There is no season during which any particular food is forbidden, though there are restrictions pretty well everywhere varying with the individual's sex, age, and social status. "Poisonous" snakes are eaten at Princess Charlotte Bay, but avoided on the Bloomfield. Yams, roots, nuts, and shell-fish are generally prepared by the women: flesh food usually by the men. Among the scrub-blacks of the lower Tully River, on the other hand, the cooking is done mostly by the males, though the opposite sex shares the labour in mainly collecting the seeds and nuts. Occasionally, food cooked by females may not be eaten by the males (*Dioscorea sativa*).

2. Middens.—I have observed but few kitchen-middens in the true sense of the term, a fact which may be due to the continual shifting of the camp owing to change of season, food supplies, and sanitary reasons. Between the junction of the Hey and Embley Rivers are to be found middens of burnt shell, mainly of *Arca granosa*, Linne, some of the mounds reaching to a height of over 30 feet, and dotted over a distance of from a quarter to half a mile in length. On the tops of certain of them may be seen remains of fires and huts, the shells, after cooking, having been thrown down the sides. Considering that the total number of tons of shell comprising these mounds must be reckoned in hundreds, probably thousands, and that the local population is comparatively scarce, the progress of their formation has evidently been going on for several generations past. In view of the fact that these middens can be scaled only with difficulty, and that an aboriginal will not exert himself physically any more than is absolutely necessary, it seems feasible that the natives have purposely cooked and camped on the summits to avoid mosquitoes and sand-flies, and so have unconsciously been continually increasing, year by year, the height up which they have had to climb.

3. Food in Season.—Speaking generally: emu, kangaroo, opossum, and fish are hunted at any time; lilies and honey in the dry season; roots and fruits in the wet season; birds, crocodile-, and turtle-eggs whenever found.

The migrations of the tribe are certainly influenced by the plants or animals it searches for and hunts.

4. Preparations for Cooking Vegetables.—The various procedures to which vegetable food is in many cases subjected, prior to being cooked or otherwise rendered palatable, will be found mentioned under the respective plants in sect. 9. Amongst such processes may now be noted washing, grinding, pounding, straining, and grating. **Washing**, which may be effected by allowing running water to percolate through a sieve, in the shape of a dilly-bag, containing the vegetable, undoubtedly removes injurious elements (*Castanospermum*, *Cycas*) and bitter tastes (*Dioscorea*). **Grinding** consists in the straight forwards-movement of a small flattened and rounded stone, which is pressed by the grasped hand along the surface of a larger more-or-less fixed slab: with a little water which is besprinkled now and again, the contents of the seed-cases, etc., broken between the stones, are mashed up into a pasty mass. **Pounding**, by means of a stick or stone, alternately with roasting, certainly removes the acrid taste of several roots (*Vitis*) which, unless so prepared, it would be well-nigh impossible to eat. For purposes of **Straining**, the place of a colander is taken by a sieve dilly-bag (*Aricennia*), a bundle of fine *Parotis* or *Panicum* grass (*Tacca*), or even a hole in the sand (*Bruguiera*). A natural Grater can be made from a piece of rough bark (*Tacca*).

5. Preparations for Cooking Meats.—Any large portion of flesh is cut up into conveniently-sized pieces, on the lower Tully River, by means of the spines on a lawyer-cane used after the manner of a cross-cut saw. Leichhardt, when on the Lynd River (Journal, etc., p. 269), speaks of "flints fastened with human hair to the ends of sticks, and which are used as knives to cut their skin and food." Flint flakes with gum-cement handles are used for similar purposes in the far Western districts. Meat is certainly preferred fresh to being tainted, and is always cooked in some way or another: the only exception I know of is on the Tully, where the intestines of some of the larger mammals, reptiles, and birds may be eaten raw by putting one end of the gut into the mouth, and, as more and more is chewed up, squeezing the contained excrement with the fingers further and further away. At the back of Princess Charlotte Bay, presumably to stop all reflex action when roasted in a coil over the fire, I have seen the snake previously and forcibly stretched, length by length, over the flames. In this same district, and possibly for a similar purpose, tortoises are killed by inserting a stiff wooden bristle through the nostril into the brain and so, apparently, into the spinal cavity wherein it is

poked up and down. Lumholtz speaks of the Torilla, etc., natives plugging the nostrils of the dugong "to kill it the quicker"; but whether this is the correct reason for the practice I have not been able to ascertain. A common way of killing fish is to bite into them deeply just at the back of the head; this is very frequently done by a fisherman before he is ready to leave the water, and who thus makes sure that on throwing the fish already caught on to the banks there is no chance of their skipping back into their native element.

6. Cooking.—The actual cooking of both animal and plant food is effected either by roasting, baking, boiling, or grilling. Of these, **Roasting**—broiling would be a better term—is perhaps the simplest and easiest process, the material to be cooked being just placed on and in the hot ashes. **Baking** in ground-ovens with heated stones, or with chunks of ant-bed when the latter are not available, varies slightly in the different districts. At Cape Bedford and on the Bloomfield a number of stones (KYE, kurma), after being well heated in a fire, are removed together with the ashes, and a hole quickly dug in the position just occupied. Along its bottom are next placed several kinds of leaves (various species of ginger); upon these the pieces of meat, amongst which the hot stones and ashes are packed, then a covering of some more leaves or tea-tree bark, and lastly a layer of earth and stones. At Mornington Island I found ground-ovens lined with tea-tree bark, with charred stones *in situ*. On the Pennefather River, instead of cutting the carcass up into pieces, heated stones are placed inside the animal to be baked. Take, for instance, the case of a kangaroo, which, on being killed, is usually first of all robbed of its tail-tendons, and then has the main joints of its upper and lower limbs dislocated to enable them to be subsequently folded over and bound together. The tongue is next drawn out and skewered with a wooden splinter over the incisors (required for spoke-shaves) to prevent them being too much damaged by the heat. The belly, incised horizontally, is now freed of its intestines, which are replaced by heated stones. The limbs are finally drawn up to the sides of the body, the whole covered with bark, tied round and round like a bundle, and put into the hot ashes, etc., with which it is well covered over. Large turtle is similarly baked here, with the insertion of hot stones through an incision in the neck. So again, in the Rockhampton district, dugong used to be "stuffed" with heated stones during its baking. On the lower Tully, an additional fire is lighted on top of the oven, which, met with in sandy places, is found to be used over and over again: banana leaves and tea-tree bark generally line it. In the Endeavour River district, around the Annan, etc., the old discarded stone heads of the original axes have been utilised in large measure for lining the ground-ovens, a fact which will account in some measure for the paucity in this district of remains of these implements at the present day. **Boiling** is done in a bark-trough (e.g., *Ourcuma australasica* on the Bloomfield), or more usually in a large *Melo* shell. I have met with the process in the hinterland of Princess Charlotte Bay, and on the Pennefather, but certainly in the latter case not as applied to the cooking of food. From the evidence of one of the earliest pioneers (Messrs. Hislop), it is a certainty that the Bloomfield blacks practised boiling before any permanent European settlement ever took place there. On the other hand, Lieutenant Cook, in describing the Endeavour River natives, only 50 miles distant, says: "They do not appear to eat any animal food raw; but, having no vessel in which water can be boiled, they either broil it upon the coals or bake it in a hole by the help of hot stones." There is no such thing as boiling on the Tully River. In connection with this same question, that the process was unknown on the South Queensland Coast is rendered pretty conclusive by the following extract from the Narrative of Oxley's Expedition, etc. (p. 59): "When Pamphlet arrived among them [the natives of Bribe Island Passage] they had no more idea that water could be made hot than that it could be made solid, and on his heating some in a tin pot, which he had saved when wrecked, the whole tribe gathered round him and watched the pot till it began to boil, when they all took to their heels, shouting and screaming, nor could they be persuaded to return till they saw him pour the water out and clean the pot, when they slowly ventured back, and carefully covered the place where the water was spilt with sand. During the whole of our countryman's stay among them, they were never reconciled to this operation of boiling." **Grilling**, which I have seen practised at Atherton and Cooktown in the case of the *Colocasia macrorrhiza*, is the general way for cooking eels on the Tully River. The form of "grid" observed at Atherton is shown in Fig. 1. The Tully appliances (MAL, warka) are of two types; the one is formed of four upright forks supporting two main cross-pieces, on which several sticks are laid, the whole reaching to a height of from 18 to 24 inches from the ground, Fig. 2; the other is lower, and built convex after the manner of a miniature hut, Fig. 3.

7. Water.—In times of scarcity, water is obtained from wells and from trees. Wells are usually dug in the beds of dried-up creeks or water-holes, and in close proximity to old swamps. The coastal blacks along the mouth of the Tully River sink circular wells with digging-sticks: they are from 8 to 4 feet deep, about 2 feet in diameter, and are spoken of as pilmba. At Bentinck Island, I saw circular wells about 1 foot in diameter, and 2 feet in depth, dug in the sand above high-water mark along the coast-line opposite Fowler Island. On the Isaacs River, Leichhardt (Journal, etc., p. 159) speaks of the natives having fenced a water-hole "round with branches to prevent the sand from filling it up." Personally I do not know of any similar provision being made by aborigines with a view to conserving water. In the Pennefather River district, in addition to being obtained from trees, water is also got by sinking. This is done in some likely spot—e.g., wherever the *Pandanus* grows in plenty—by driving a spear some 3 or 4 feet down into the ground and seeing whether the extremity is moist or not; if the quest be successful, a bunch of dried grass will then be rammed down. The grass acts as a strainer to the *débris*, and thus permits of the water being sucked up by means of a reed. In the hinterland of Princess Charlotte Bay, on the Palmer and Pennefather Rivers, and elsewhere, the *Melaleuca* are the usual trees whence water may be derived. The butt of this tea-tree is ordinarily more or less circular in section, but every here and there is to be met one more or less lozenge-shaped, due to a lateral bulge. From the bases of these bulges, when cut, a pint or two of water is obtainable, which, though of a saltish taste, often proves very acceptable. Whether these bulges, which may occasionally be seen bilateral on the tree, are pathological or not, I am unable to decide. A. Thozet says of the *Sterculia rupestris*, Benth.:—"The natives refresh themselves with the mucilaginous sweet substance afforded by this tree. . . . They cut holes in its soft trunk, where the water lodges and rots them to its centre, thus forming so many artificial reservoirs. On their hunting excursions afterwards, when thirsty, they tap them one or two feet below the old cuts and procure an abundant supply."

Flinders [Terra Australis, p. 114] makes the following mention of water-conservation at Halfway Island, about midway between Murray Island and the Queensland main:—"There being no water upon the Island, they [the natives] seemed to have hit upon the following expedient to obtain it: Long slips of bark are tied round the smooth stems of the *Pandanus*, and the loose ends are led into the shells of the cockle placed underneath. By these slips, the rain, which runs down the branches and stem of the tree, is conducted into the shells, and fills them at every considerable shower; and as each shell will contain two or three pints, forty or fifty thus placed under different trees will supply a good number of men."

8. Minerals.—Clay from the ant-hills—the outside covering—is on the Bloomfield (R. Hislop) used to "fill up" with when no other edible substance is available. The women and piccaninnies seem always able to eat of this, even after a meal of things more nourishing: it requires no preparation, and is known as kappai.

White clay, a kaolin (hydrous silicate of alumina), is eaten, both at the Bloomfield and at Cooktown. In the former district, it is generally (R. Hislop) dug out from the veins in the cliffs or in the banks of the creeks, and then carefully pounded and sifted, so as to render it quite smooth and free from grit. It is next placed in a bark trough, and, by the addition of water, worked into a stiff paste. This paste is now made into a cake, $1\frac{1}{2} \times 4 \times 8$ or 10 inches, and placed in the sun for from six to eight days, when it is eventually wrapped up in leaves, buried in the ashes, and a hot fire made over it. When cool, it is ready for use, and considered a delicacy. [This same white clay is employed for painting weapons, etc.] KYE, Bld., kamar; KYI, Ckn., C. Bd., gamai.

9. Plants.—The following list, with details of preparation where necessary, comprises a fair proportion—some 240—of the edible plants used by the North Queensland aboriginal. The meanings of the abbreviations employed are given in the Preface. The aboriginal names are those applied in the different localities where they have been collected, and do not necessarily imply that such and such a plant is used as food, or met with, only in the particular district or districts mentioned. In some cases, where, in addition to constituting an article of diet, the plant is applied to other purposes, this is noted in square brackets. In order to make this list as complete as possible I have introduced various plants, unknown to me personally as vegetable foods, but recorded as such by Messrs. A. Thozet and Edward Palmer. Thozet's pamphlet was published at Rockhampton in 1866 as "Notes on some of the Roots, Tubers, Bulbs, and Fruits used as Vegetable Food by the Aborigines of Northern Queensland, Australia": Palmer read his paper "On Plants used by the Natives of North Queensland, Flinders and Mitchell Rivers, for Food, Medicine, etc.," before the Royal Society of New South Wales on 1st August, 1883.

- Acacia Bidwillii*, Benth.—Roots of young trees roasted after peeling. (E. Palmer.)
Acacia crassicaarpa, A. Cunn.—Roots roasted. KRA, té-ra; KYE, B's H., mon-jin; KYI, Ckn. (but not eaten here), yaro-in.
Acacia decora, Reichb.—Gum gathered and eaten. (E. Palmer.)
Acacia farnesiana, Willd.—Seeds roasted. Cloncurry. (E. Palmer.)
Acacia holosericea, A. Cunn.—Fruit eaten. KYI, Ckn., C. Bd., warun.
Acacia homalophylla, A. Cunn.—Gum gathered and eaten. (E. Palmer.) [Spears, boomerangs, etc.]
Acacia pallida, F. v. M.—Roots of young trees roasted. (E. Palmer.)
Achras sp.—Fruit. (A. Thozet.)
Acrostichum aureum, Linn.—Roots roasted. KUG, C. Gr., dai-ingal.
Adenanthera abrosperma, F. v. M.—Seeds roasted. Mitchell River. (E. Palmer.)
Aleurites moluccana, Willd.—"Candle-nut." Fruit roasted in a slow fire, and when the nut cracks it is fit to eat. [Oil utilised for spear-painting on the Bloomfield.] KYI, Ckn., tarkal; KYE, Bld., billar.
Alsophila Woodsiana.—The young growing point of the stem, after being roasted, is eaten. NGI, CHI, Ath., kallai; NGA, Ath., kallaji.
Ammannia multiflora, F. v. M.—The whole plant is gathered and broken up with the feet on the ground to separate the woody parts; it is then winnowed, and ground up with water on flat stones, and baked as a cake. Cloncurry. (E. Palmer.)
Amomum Dallachyi, F. v. M.—Fruit eaten. KYI, C. Bd., dor-churn; Ckn., tor-chun; KYE, Bld., jun-jun.
Amorphophallus galbra, Bail.—Fruit, stem, root, eaten: all baked. KYI, C. Bd., Ckn., bandilin.
Aneilema siliculosum, R. Br. Roots eaten, both raw and roasted. NGG, a-un-du.
Antidesma Bunius, Spreng.—The Bloomfield "cherry," where it is squashed upon a bark trough or shell, and eaten raw. KYI, Ckn., KYE, Bld., chunka. MAL, moi-kin.
Antidesma Dallachyanum, Baill.—Fruit eaten. NGI, CHI, NGA, Ath., chi-chu; KUG, C. Gr. ji-jor., je-jo.
Aponogeton monostachyus, Linn.—Roots raw or baked. KYI, Ckn., KYE, Bld., kapabina.
Archontophoenix Alexandrae, F. v. M.—Base of growing shoot eaten raw or roasted. [Timber for spears.] MAL, kó-pangara.
Aspidium unitum, Sw., var. *propinquum*.—Rhizome eaten after being alternately roasted and pounded for some considerable time. KYI, Ckn., ngar-pul.
Atalantia glauca, Hook.—Fruit raw. PPT, wumbanyi; MIT, kandutal.
Atylosia reticulata, Benth.—Roots roasted and hammered. KYI, Ckn., korlbun.
Avicennia officinalis, Linn. Fruit put in the ashes, and covered over with tea-tree bark and ashes, i.e. baked. It is then removed and put into a (sieve) dilly-bag, and washed in it, the water and debris passing through: the bag with its contents is finally dried by squeezing, and the "mush" poured onto a piece of bark and eaten. KYI, Ckn., C. Bd., babun; NGG, rdái-ite; Red Island, ipamaran.
Avicennia tomentosa, R. Br.—Fruit is baked or steamed in hollows, made in the ground, in which they make fires; then taken out, and soaked, and baked in the ashes. Tidal waters in the Gulf. (E. Palmer.)
Banksia dentata, Linn.—The Cape Bedford blacks break off the blossoms which are full of honey, put them in water, and drink it; the liquid is not left to ferment. KYI, C. Bd., kabir.

- Barringtonia racemosa*, Gaudich. Fruit used as food. [Roots utilised for fibre, stems for fish-poison, bark for medicine.] KYI, Ckn., korrun; KRA, aljúl-kal, ju-ra; KWA, armé-ir, nau-um.
- Bauhinia Carronii*, F. v. M.—Flowers have a clear honey secreted, which is squeezed out by the fingers and sucked: they also place the flowers in water and drink the mixture. Cloncurry (E. Palmer). Georgina River.
- Blechnum orientale*, Linn.—The small rhizomes, after being alternately roasted in the fire, and “hammered” with a stone, are eaten. KYI, C. Bd., baral.
- Blechnum serrulatum*, Rich.—Rhizome roasted and hammered. Red Island. MAL, dugal.
- Boerhaavia diffusa*, Linn. Roots roasted. NGG, á-mi; PPT, wituka, winnu; MIT, ku-jo.
- Bowenia spectabilis*, Hook.—Rootstock eaten on the Bloomfield, at Cape Grafton, etc.; not at Cooktown. KYI, Ckn., jul-bin; KUG, ja-yur.
- Bruguiera Rherdii*, Blume.—“Mangrove.” The elongating radicles are eaten, after being prepared as follows:—Baked in the ashes for some considerable time to allow of them becoming quite soft, these radicles are pounded between two stones, the skins picked off and thrown aside, and the yellowish-looking mass “washed” in fresh water contained in one of the ordinary bark-troughs. The washing consists of squeezing up the pulpy mass with the fingers under water, allowing it time to settle, and pouring off the clear surface-water. After some four or five of such washings—according to the quantity of vegetable being treated—the powdery-looking mass is transferred to a more or less circular basin-shaped hole scooped out in the sand. The hole has this peculiarity, and evidently an important one, that its entire lining is well damped and so smoothed into shape. When the mass has been poured in, the lining of the hole acts as a kind of fine colander, allowing the water to pass through in to the sand below, but retaining what now looks very much like some mashed mealy potato, which indeed it also resembles somewhat in taste. On occasion, if too much water has been poured in, and it is not percolating as quickly as might be wished, some of the top-water is got rid of by means of a small surface drain. These holes in the sand are often to be noticed along the coast-line, especially in the neighbourhood of the mangrove-swamps. KYI, C. Bd., Ckn., bambir; NGG, tcherda (timber), mo-odo (radicle); Red Island, wappa.
- Bruguiera gymnorhiza*, Lam.—Radicke first of all baked, then skin scraped off, sliced up with a snail-shell knife, and finally soaked in water all night, when it is ready for eating. MAL, mau-ai.
- Buchanania Muelleri*, Engler.—Fruit eaten. KYI, Ckn., C. Bd., bandai; KYE, Bld., pandar; KRA, ngau-ra; KWA, thai-ir; KUG, ji-lara.
- Calamus australis*, Mart.—“Large lawyer-cane.” Its berries are eaten at Cooktown: these are squashed in a bark-trough, and mixed with water, so as to make an (un-fermented) acid drink, at the Bloomfield (R. Hislop). At Atherton, the young shoots are eaten raw or roast. [Also used for “prodders,” fish-traps, etc.] KYI, Ckn., C. Bd., go-ra, go-ra; also KYI, Ckn., mé-tal, polló-ga; KYE, Bld., milma; KRA, a-rú-ya, wawand-ja; KWA, armi-ana; NGI, CHI, NGA, Ath., karkin; MAL, chunggan.
- Calamus caryotoides*, Mart.—“Small lawyer-cane.” The young “shoots” eaten both at Cooktown and the Bloomfield; the berries at Atherton. [Dilly-bags at Cairns, etc.] KYI, Ckn., C. Bd., ngan-in; KYE, Bld., karko; NGI, CHI, Ath., bo-kul; NGA, Ath., bo-ko.
- Calamus Moti*, Bail.—At Atherton, the young growing point of the stem is roasted, skinned, and then hammered before eaten; on the Tully, it is eaten raw. CHI, NGA, Ath., yarpulam; NGI, mollukan; MAL, bai-kal.
- Canthium lucidum*, Hook. & Arn.—Berries raw. Red Island. NGG, warra-anji.
- Capparis canescens*, Banks.—Fruit. KUG, kurpori.
- Capparis humistrata*, F. v. M.—Fruit. KUG, ko-par.
- Capparis lasiantha*, R. Br.—Fruit. Cloncurry, Mitchell, Flinders. (E. Palmer.)
- Capparis lucida*, R. Br.—Ripe fruit eaten. Mitchell, Lynd. (E. Palmer.)
- Capparis Mitchellii*, Lindl.—Fruit. KYI, Ckn., kalm-ba.
- Capparis nobilis*, F. v. M.—Fruit. KYI, Ckn., kalm-ba.
- Capparis ornans*, F. v. M.—Fruit. NGI, CHI, NGA, Ath., manni.
- Capparis spinosa*, var. *nummularia*, F. v. M.—Fruit raw. Cloncurry. (E. Palmer.)
- Capparis umbonata*, Lindl.—Fruit eaten at Camooweal.
- Carallia integririma*, DC.—Fruit. KRA, bilbi-a, KYI, Ckn., melljuran, bo-kor; KYI, C. Bd., bog-go.
- Careya australis*, F. v. M.—The Kungganji blacks eat the fruit. [For twine, medicine, and various other purposes.] KUG, barjal; KUN, korn-gam; MAL, machal; KMI, jo-ora; NGG, ku-iperi.
- Carissa ovata*, R. Br.—Fruit gathered in quantities and eaten raw. Cloncurry. (E. Palmer.)
- Castanospermum australe*, A. Cunn.—“Moreton Bay Chestnut.” Fruit eaten. On the Bloomfield, this nut is nearly always obtainable, but, like the *Entada scandens*, is not relished. It is one of the worst foods to prepare, a long time being required to wash away the disagreeable flavour. It is first of all baked in a stone oven, then pounded and sifted, put into a bark trough, and treated with like the *Dioscorea sativa* yam (R. Hislop). At Atherton, the shells being broken, the kernels are commenced to be baked about sunrise, the covering leaves and earth being removed about mid-day. They are then cut up into very fine chips with a sharp shell, etc., and at about sunset are put into a lawyer-cane dilly-bag, through which the creek (i.e. running) water is made to percolate, and there it remains until the following morning, when it is about ready to eat. On the lower Tully River, after the beans have been gathered, the nuts are removed, and placed in heaps in the ground-ovens. After covering with leaves and sand, a fire is lit on top, with the result that the nuts are practically steamed, a process occupying from a few hours up to a whole day. When removed, they are sliced up very fine with a snail-shell knife, and put in dilly-bags in a running stream for quite a couple of days, when they are ready. If not sliced up very fine, the bitter taste remains. KYI, Ckn., ku-par; KYE, Bld., marchái; NGI, NGA, Ath., wakki; CHI, Ath., mí-ran; MAL, meran; KUG, chonggora.
- Ceropegia Cumingiana*, Decne.—Yam. NGG, andréata.
- Chilocarpus australis*, F. v. M.—Fruit. MAL, pai-amara, kammin.
- Olerodendron inerme*, R. Br.—Fruit. [Timber for firesticks.] NGG, tá-anji (fruit).
- Cochlospermum* sp.—Roots of the young trees . . . are roasted, when the skin peels off, leaving the edible part white and delicate and well flavoured. Mitchell River. (E. Palmer.)

- Cocos nucifera*, Linn.—“Cocoa-nut.” KYI, C. Bd., diremandi. [I have purposely introduced this here, as Lieutenant Cook has inserted the “Cocos” in his vocabulary of the Endeavour River language taken in 1770.]
- Coelospermum reticulatum*, Benth.—Seeds eaten raw. Red Island, ai-yuluka.
- Colocasia antiquorum*, Schott.—“Taro.” Rootstock eaten, after baking. KYI, Ckn., C. Bd., pa-nu; KRA, pin; KWA, pen.
- Colocasia macrorrhiza*, Schott. Rootstock eaten after being alternately roasted and pounded between two stones: this is the ordinary method of preparation at Cooktown, on the Bloomfield and the Tully Rivers. At Atherton, and sometimes at Cooktown, after the roots have been roasted, they are placed on a specially constructed grid framework about 15 or 18 inches above the fire. Here they are left for some considerable time before being ultimately pounded. KYI, Ckn., C. Bd., mur-gan; KYE, Bld., dillunjur; NGI, CHI, NGA, Ath., kum-bi; MAL, kumbi.
- Cryptocarya Bancrofti*, Bail. Nut roasted in its shell, shell cracked, kernel pounded between round and flat stone, and then soaked in water, which percolates through a dilly-bag immersed in it. MAL, bara; Cardwell, wanga.
- Cryptocarya Palmerstoni*, Bail. The nut is roasted, cracked, the kernel pounded into flour, and treated in the same way as the *Cycas media*, except that it is ready for eating after the water has been percolating for some five or six hours; sometimes, however, it may be left in the water all night (R. Hislop). KYE, Bld., budjabai; NGI, pallaga; CHI, ko-ai; NGA, ko-ar.
- Cucumis trigonus*, Roxb.—The natives roll the stalks and fruit on the ground to free them from their hairy covering; they bite off one end and press the pulpy substance and seeds into their mouth, and throw away the outer rind, which is bitter; also used roasted. Cloncurry. (R. Palmer.)
- Curculigo ensifolia*, R. Br.—Rhizomes roasted: baked on the Bloomfield. KYI, Ckn., C. Bd., gom-ol; KYI, C. Bd., batti; KYE, Bld., ku-mol; KYE, B's. H., jula; KMI, yu-áva; KWA, lí-a, porn; KRA, yu-óba, andór-a.
- Curcuma australasica*, Hook.—“Wild ginger” Tuberous roots either roasted or boiled: in the latter case a large Melo shell is generally used; KYI, Ckn., kumbiji; KYI, C. Bd., Starcke River, an-dan; KRA, bu-nanta; KWA, ron-tan.
- Cycas media*, R. Br.—“Zamia.” Fruit eaten. On the Bloomfield River it is fit to eat from July to January. The nuts are gathered by old men, women, and girls. They are roasted and cracked, the kernels being kept for some four or five days before being pounded up into flour by the women. The reason for letting these few days elapse is said to lie in the fact that the delay helps to make them pound up more finely. The pounded nut is next sifted through a palm-fibre dilly-bag, which, having a mesh with smaller interspaces than the other varieties of bag, prevents the coarser particles getting through. The flour is next put into a grass dilly-bag, which has been previously folded sideways upon itself so as to form a basin-like receptacle, and placed near a stream. With the help of leaves acting as a trough, water is allowed to continue flowing into the receptacle, matters being so regulated that the water never overflows the edges. Fresh water is thus continually percolating through the Zamia flour in its dilly-bag colander, right through the night, and in the morning it is ready to be eaten. It may, however, be kept for some three or four days, up to which time it is believed to improve; it will not, however, keep good any longer than that. (R. Hislop.) On the lower Tully River it is steamed and cut up like the *Castanospermum australe*, but rushing water is made to fall from a height on to the contents of the dilly-bag held below, so as to keep the mass both strained and well stirred—a process which is kept up continually for quite a day. KYI, C. Bd., Ckn., ba-dur; KYE, Bld., má-ra; NGI, CHI, NGA, Ath., kámmama; KUG, ni-jar; MAL, kinalo.
- Cymbidium canaliculatum*, R. Br.—The pseudobulbs of this plant are used by the blacks in Wide Bay, and by other coast blacks in the North. (E. Palmer.)
- Cynanchum floribundum*, R. Br.—Pods and leaves full of milk, eaten raw when young. Cloncurry. (E. Palmer.)
- Cyperus esculentus*, Linn.—“Tubers” (swollen joints of the underground stems) eaten raw or roasted, after the husks have been removed. The removal is ordinarily effected by a rolling between the fore-finger and thumb, occasionally between the open hand and the thigh. PPI, mangaru; MIT, makora.
- Dallachya vitiensis*, F. v. M.—Fruit. (A. Thozet.)
- Davidsonia pruriens*, F. v. M.—Fruit. MAL, orai.
- Dendrobium canaliculatum*, R. Br.—Pseudobulbs, after being deprived of the old leaves, are eatable—baked. (A. Thozet.)
- Dioscorea sativa*, Linn., var. *elongata*, Bail.—Rootstock baked first, and then roasted: skin removed. KYI, C. Bd., Ckn., gal-gur; at Cooktown it is also known as kar-wu, an old specimen being called má-mi; KYE, Bld., kalkur, kau-u; KYE, B's. H., kun-janga; KWA, tau-úra; KRA, wái-ka; KMI, anyórbil; NGG, daiperi; Mapoon name, ko-i-ri.
- Dioscorea sativa*, Linn., var. *rotunda*, Bail.—On the Bloomfield, this is suitable for use from about the middle of February to about the middle of May, the approximate extent of the wet season, during which it constitutes the main article of diet. It is dug up and prepared for use by both men and women; but if by the former, it may be eaten by males only. The actual mode of preparation is as follows:—After being dug out, it is carefully washed, and all dirt and adventitious roots removed. It is next baked in a stone oven for about four hours, at the end of which time it is mashed up in a grass dilly-bag, and then strained through a dilly-bag into a bark trough. The dilly-bag remains in the trough, and the yam “mash,” to which water has been added, is stirred about and worked up until everything but the fibre and husk strains through into the trough below. The next process is to fill up what is now in the trough with water, to mix the “mess” well up, and allow it to stand therein for a good half-hour or so, i.e., until such time as the water clears, when it is poured off, and fresh water added. It sometimes takes seven or eight waters before the disagreeable taste is removed. As soon as the cook considers it fit, she digs a hole of about the same size and shape as the inside of an ordinary wash-hand basin; this is

always done in some sandy place, the excavation being lined with clean sand. Into this hole the now semi-liquid mass is gently poured, and when the water is all drained off it is ready for eating, the prepared article looking much like the ordinary preserved (tinned) potato. It has to be eaten the same day as prepared; fermentation takes place quickly. (R. Hislop.) On the Morehead River the preparation is very similar. Rootstocks are cut up into halves or quarters, and washed in a bark trough. Baked in a hot ant-bed covered with tea-tree bark and earth. Here it remains for about twenty minutes, when it becomes soft, and is transferred into a grass dilly-bag, which is squeezed under water in a trough, the mealy substance passing into the water through the interspaces of the bag; the latter with its contents, such as they are, is now thrown aside. That which has been sieved through sinks to the bottom, the *débris*, etc., rising to the surface of the water, which is then carefully poured off. More water is poured on, the stuff allowed to settle, poured off again, and so on for some four or five times. A circular basin is next hollowed out of the sandy soil, up along the side of which a piece of bark is made to rest. From the trough the watery meal is now poured out into the piece of bark, whence it passes gently down into the hole, the water percolating through. As soon as fairly dry it is eaten. Great stress appears to be laid up here on the piece of bark resting down the side of the basin-like excavation: it is said to prevent the "spluttering" of the meal, which would clog up the interstices of the sand, and so tend to prevent the water passing through.—KYI, Ckn., wo-kai; KYE, Bld., wo-kai; KYE, B's. H., ka-ru; KRA, rau-ola; KMI, jor-wa; KUN, kolbuk; NGG, no-nu.

Dioscorea transversa, R. Br.—Rootstock eaten, roasted (E. Palmer says, mostly eaten raw). NGI, CHI, Ath., chokoru; NGA, Ath., cho-ko; Red Island, am-pu.

Dolichos biflorus, Linn.—Rootstock roasted. KYI, Ckn., C. Bd., malkan; KYE, B's. H., tandaji.

Dryophloeus Normanbyi, F. v. M.—On the Bloomfield the buds and young leaf-stalks are eaten [Timber for spears, fibre-strands for sieve-bags.] KYI, Ckn., C. Bd., do-war; KYE, Bld., du-ar.

Elæagnus latifolia, Linn.—Fruit. NGI, millai-millai.

Elæocarpus grandis, F. v. M.—"Quandong." On the Bloomfield, when ripe, it is squashed in a bark-trough, mixed with water into a paste and eaten raw (R. Hislop). KYI, Ckn., C. Bd., mu-lun; KYE, Bld., jan-bal; KUG, mur-kan; MAL, muragan; NGI, teramba.

Elettaria Scottiana, F. v. M.—"Wild ginger." Fruit raw. KYE, Bld., jeddo; KUG, cha-kin.

Eleusine ægyptiaca, Pers.—A sufficient quantity having been collected—a woman always preparing all seed food in the Boulia district—it is more or less broken up with the hands, next brushed into a heap, and then put into a circular hole in the ground. Within this hole, about 12 inches in diameter, and 7 or 8 in depth, the woman stands: pressing alternately one foot upon the other, she exerts a sort of rotary motion into which she throws all her weight, with the result that the grass upon which she treads becomes more and more disintegrated, the seed itself gradually working its way to the bottom. To throw all her weight upon the legs, she either supports herself on a sort of tripod of forked sticks erected in front of her, or else, when it happens to be handy, some low-lying limb of a tree. From the hole the seed is transferred to a wooden bowl, any of the larger sprigs, etc., are removed with the fingers, and the rest winnowed with the breath or a current of air: it is now clean enough and ready for grinding on the proper stone. This is effected by a more or less forwards and backwards movement of the arm and hand. During the grinding process the seed is moistened with water, and as each handful is adequately ground it is smeared over the edge of the stone slab into a bowl: when sufficient of this pasty mass has been prepared, it is cooked in the ashes, like a damper, though sometimes it is eaten raw. PPT, yâraka.

Enchylæna tomentosa, R. Br.—Fruit raw. Cloncurry. (E. Palmer.)

Endiandra insignis, Bail.—Prepared like the *Cryptocarya Palmerstoni*. NGI, kurunggai; NGA, CHI, bumban.

Enhalus Kœnigii, Rich.—Fruit roasted and eaten. Obtained in the salt water, and the blacks (on the northern side of Cape Bedford) can only get it when the tide is low; not met with at Cooktown. KYI, C. Bd., wa-pan.

Entada scandens, Benth.—"Matchbox bean." Apparently only eaten when nothing else is available. The seed is first baked in the ashes, then cracked up, and, inside a dilly-bag, left in running water all night. KYI, Ckn., C. Bd., yurl-nga; KYE, Bld., bá-bur; NGG (who often mix it with the *Bruquiera Rheedii*), parpangata.

Eriosema chinense, Vog.—Rootstock skinned and roasted. KYI, C. Bd., Ckn., ban-cha; KYE, B's. H., kallar; KRA, nergal; KWA, al-ngáda; KMI, torakal.

Erythrina vespertilio, Benth.—Roots raw. [Timber for firesticks, flowers for mourning.] NGG, arán-yi.

Eucalyptus bicolor, A. Cunn.—A staple article of diet in the Boulia district when grass-seed is scarce. With a hooked stick some terminal branches of this tree are pulled down, and, just as they are, spread out to dry on a piece of ground cleared for the purpose. Here they lie, according to the heat of the sun, for half-a-day or a day, till sunset or the following morning. The ends of the branches are then all collected together, and the seed obtained by damping the distal extremities and brushing them off into water, as in the case of the *Sporobolus actinocladius*. Before the ultimate drying, however, the seed is kept for a couple of hours or so in water, which during this time is repeatedly changed, so as to remove all traces of the taste of the gum. After being ground on the proper "grinding-stone" it is eaten raw. PPT, kárapari.

Eucalyptus corymbosa, Sm.—The blossoms of this "bloodwood" are sucked for the honey by the Boulia and Georgina River natives.

Eucalyptus terminalis, F. v. M.—[Medicine.] NGG, raru. Manna is procured from the leaves and small branches by being gathered and laid on pieces of bark, when the particles of sugar or gum fall off, or are scraped off with mussel-shells into a kooliman (bowl), or the leaves, when covered with the white exudation, are pounded together with a stone, and roasted in the ashes. Sometimes the sugary particles are gathered as they fall from the trees. Cloncurry, Gilbert River. (E. Palmer.)

Eugenia carissoides, F. v. M.—Fruit raw. NGG, esyú-re.

- Eugenia cormiflora*, F. v. M.—Fruit. KYI, Ckn., C. Bd., bannapan; KYE, Bld., warta; KUG, O. Gr., gorubal; NGI, CHI, tukuro; NGA, morro.
- Eugenia Hislopii*, Bail.—Fruit raw. KYE, Bld., walkaran; KYI, Ckn., ngalkaran.
- Eugenia kuranda*, Bail.—Fruit. NGI, wanchan.
- Eugenia leptantha*, Wight.—Fruit. KUG, C. Gr., kai-go.
- Eugenia suborbicularis*, Benth.—Fruit. KYI, C. Bd., dello; Ckn., jello; KRA, wái-ra; KUG, kurobal; KYE, Bld., pajinjaka—where it is baked in the ashes, sometimes eaten raw (R. Hislop). NGG, é-sie; Horn and Thursday Island, ko-ái; Red Island, o-yanda; MAL, chin-par.
- Eupomatia laurina*, R. Br.—Fruit. KUG, ma-ban; MAL, mu-jir.
- Exocarpus cupressiformis*, Labill.—Fruit. KYI, C. Bd., Ckn., bonuboi.
- Exocarpus latifolius*, R. Br.—Fruit. (A. Thozet.)
- Fenzlia obtusa*, Endl.—Fruit. KYI, C. Bd., balng-galng-ga; Red Island (?); KUG, kongonyor.
- Ficus aspera*, R. Br.—Fruit raw. Cloncurry, Mitchell River, (E. Palmer.)
- Ficus colossea*, F. v. M.—Fruit. KYI, Ckn., bannabúlka, kokoya.
- Ficus Cunninghamii*, Miq.—Fruit. [Twine.] NGG, bé-ni.
- Ficus chretoides*, F. v. M.—Fruit. [Shields, blankets.] MAL, magura.
- Ficus esmeralda*, Bail.—Fruit. KUG, pandara.
- Ficus eugenioides*, F. v. M.—Fruit. KUG, ku-loi.
- Ficus fasciculata*, F. v. M.—Fruit. [Fibre-twine.] KYI, Ckn., katyil; Starcke River, berdiga; KRA, alvá-ara; KWA, artir.
- Ficus glomerata*, Willd.—Fruit. KYI, Ckn., mu-char.
- Ficus hispida*, Linn.—Fruit, as well as leaves (eaten raw). MAL, chalkan.
- Ficus nitida*.—Fruit. [Twine.] NGG, dortalama.
- Ficus opposita*, Miq.—Fruit. [Its rough leaves used for polishing wommeras, etc.] KYI, Ckn., C. Bd., de-bor; KMI, mo-injal; KRA, murrntial.
- Ficus orbicularis* (var.)—Fruit. [Fibre-twine.] NGG, mo-i.
- Ficus pilosa*, Reinw.—Fruit. KUG, burrowa.
- Ficus platypoda*, A. Cunn.—Fruit, [Fibre-twine.] KYI, C. Bd., berdiga; Ckn., maramú-ga; KRA, ampé-awan; KWA, tu-anga.
- Ficus pleurocarpa*, F. v. M.—Fruit. [Bark for blankets.] NGI, CHI, NGA, karpi.
- Ficus retusa*, Linn.—Fruit. KUG, tunduli.
- Ficus stenocarpa*, F. v. M.—Fruit. KUG, ke-ril.
- Ficus Thynneana*, Bail.—Fruit. KUG, dorndorli.
- Ficus vesca*, F. v. M.—Fruit. Mitchell and most coastal rivers. (E. Palmer.)
- Fluggea obovata*, Willd.—Fruit. KRA, ko-wal; KYI, Ckn., C. Bd., go-ika; KYE, Bld., ku-ika, where it is generally squashed in a bark trough; KMI, eramba; NGG, las-kwáni-kwi.
- Fungi*.—On the western side of the Mulligan a sort of truffle, with a yellowish flesh after roasting, appears to be a delicacy. It is very difficult to find, even with the practised eye, a small undulation on the surface of the ground being its only indication. When once it has pushed its way through, it rapidly goes "bad" with the exposure. (J. Coghlán.)
- Gahnia pittacorum*, Labill.—Leaf-buds are eaten. KYI, C. Bd., yerer.
- Ganophyllum falcatum*, Blume.—Fruit. KUG, wurrabah.
- Grewia polygama*, Roxb.—Fruit. [Medicine.] KRA, ká-lana, kaláu-nang; KWA, tú-ala; KYE, B's. H., par-mo; KMI, kunad; KUN, mokomid; KYI, Ckn., unggorgamoin, punggupúryuwe.
- Hardenbergia retusa*, Benth.—Yam roasted, skin removed, hammered and mixed with water. KUG, pai-a; KYI, C. Bd., gung-an; NGG, ru.
- Heleocharis sphacelata*, R. Br.—Tubers eaten raw, or baked first and then roasted. On the Pennefather River, besides being eaten raw, they may be thrown into hot ashes for a few minutes, rolled out one by one, and hammered into one big ball. [Mats, dillybags.] KYI, Ckn., C. Bd., and KYE, Bld. ma-bil; KWA, ari-ira; NGG, panjé-a; MAL, bulkuru.
- Hibiscus brachysiphonius*, F. v. M.—Roots roasted and hammered. [For spears.] NGG, yí-awara.
- Hibiscus divaricatus*, Grah.—The young buds are eaten raw, and the thick root is peeled and the skin eaten raw. Cloncurry, Mitchell, Rivers. (E. Palmer.)
- Hibiscus ficulneus*, Linn.—Stem and root of young plant roasted in the ashes. Cloncurry, Flinders, Herbert, Rivers. (E. Palmer.)
- Hibiscus heterophyllus*, Vent.—Roots of young plants, young shoots, and leaves eatable, without any preparation. (A. Thozet.)
- Hibiscus microclenus*, F. v. M.—Roots eaten on the Embley River.
- Hibiscus pentaphyllus*, F. v. M.—The young buds are eaten raw. Mitchell. (E. Palmer.)
- Hibiscus rhodopetalus*, F. v. M.—Roots eaten; prepared like the *Typhonium Brownii*. KRA, dai-ru.
- Hibiscus*, sp.—Roots eaten raw, after being broken between stones. KWA, arbú-i; KRA, ni-írra; KYI, Ckn., and KYE, Bld., markadji.
- Ipomæa angustifolia*, Jacq.—Rhizome eaten, after being first baked and then roasted. KYE, B's. H., jollol; KRA, ngí-ala; KWA, o-wo; KYI, C. Bd., kalborngga, dirndol; KYI, Ckn., kalburunga.
- Ipomæa eriocarpa*, R. Br.—Rhizome roasted. KYI, Ckn., kand-ja.
- Ipomæa gracilis*, R. Br.—Rhizome eaten after being roasted (sometimes hammered). KMI, almoi-íra.
- Ipomæa grandiflora*, Lam.—Yam roasted in hot ashes. NGG, endabari.
- Ipomæa Pes-Caprae*, Roth.—Rhizome eaten, after being baked and pounded. KYI, O. Bd., wain-tehor; KYI, Ckn., wain-jo.
- Ipomæa turpethum*, R. Br.—The young buds are eaten raw when the seeds are white. Cloncurry. (E. Palmer.)
- Ipomæa uniflora*, Rœm. et Schult.—Rhizome eaten after roasting and pounding. KMI, kon-yara.
- Ixora timorensis*, Dcne.—Fruit. KUG, karantal, kumbarogul; NGG, kwaranam.
- Lepironia mucronata*, Rich.—Tubers eaten. KUG, chakata.
- Liouala Muelleri*, Wendl. et Drude.—Base of growing shoot eaten. MAL, chakoro.
- Limnanthemum crenatum*, F. v. M.—Small round tubers roasted for food. (E. Palmer.)
- Limnanthemum geminatum*, Griseb.—Tubers roasted or baked. NGG, murite.

- Livistona australis*, Mart.—“Cabbage-tree palm.” The growing stem is eaten. The gum, exuding from this tree, is sucked like a lolly by the Morehead River blacks. White part of undeveloped leaves eatable (A. Thozet). [Fibre-twine. Leaf-troughs.] KMI, alkárint; KWA, alki-an; KRA, ararái-ya; KYI, Ckn., karái (but where it is no longer found); KYI, C. Bd., do-bi.
- Livistona humilis*, R. Br.—“Heart” hammered and roasted at Red Island. On the Pennefather River, the “heart” is baked in ashes, then uncovered, and holes made in it with a stick. Water is next dribbled into each hole, and the vegetable left to cool. It is finally either beaten up and eaten, or else put into water which it sweetens and is drunk. Red Island, inmuru; NGG, dré-amberi.
- Lucuma galactoxylon*, F. v. M.—Fruit picked green, buried in ground for a few days, and then eaten uncooked. KUG, murdarka, ngorbai.
- Lucuma sericea*, Benth. et Hook.—Fruit. KYI, C. Bd., Ckn., mornggo; NGG, morra.
- Loranthus exocarpus*, Behr.—Fruit raw. Cloncurry. (E. Palmer.)
- Loranthus longiflorus*, Desr.—Fruit raw. Flinders River. (E. Palmer.)
- Maba humilis*, R. Br.—Fruit raw. Cloncurry. (E. Palmer.)
- Macrozamia Miquelii*, F. v. M.—The seeds . . . are baked for about half-an-hour under ashes; the outside covers and the stones are then broken, and the kernels, divided by a stroke of the “kondola” [pounding-stone], are put into a dilly-bag and carried to a stream or pond, where they remain six or eight days before they are fit for eating. (A. Thozet.)
- Malaisia tortuosa*, Blanco.—Seed roasted and eaten at Cooktown. [Mops. Fibre-twine.]
- Marsilea Drummondii*, Braun.—“Nardoo.” The hard-shelled seed [spore-cases], easily and speedily collected from the plant when growing in marshy swamps, is pounded and broken up with a special stone, etc., previous to grinding. Boulia. Cloncurry.
- Melaleuca* sp.—Blossoms sucked for honey on the Georgina, Lynd, etc., Rivers. Water is obtained from the bulges in the dry season. [Blankets.] KYI, C. Bd., bo-du; KYI, Ckn., put-yo; KWA, tu-a; NGG, rdí-i; KMI, mor-ngi.
- Melastoma malabathricum*, Linn.—Fruit. KYI, C. Bd., di-eni.
- Melodorum Leichhardtii*, Benth.—Fruit. (A. Thozet.)
- Microstemma tuberosum*, R. Br.—Tubers eaten, both raw and roasted. KYI, C. Bd., warboboga; KYI, Ckn., and KYE, Bld., warabú-ga; KRA, angká-ala; KMI, aká-la; KWA, ar-tir.
- Mimusops Browniana*, Benth.—Fruit. The colour of the fruit is more or less red on the tree, and in that condition is usually eaten. At Cape Bedford, however, especially when brought over from the islands where, owing to the scarcity of water, the natives cannot stay long, the fruit is collected, and put into a hole in the ground with tea-tree bark below, and leaves, earth, or grass above: in about a couple of days the fruit turns black, when it is considered fit to eat. KWA, andú-a; KYI, C. Bd., ngundar; Horn and Thursday Island, u-bar.
- Mimusops parvifolia*, R. Br.—Fruit. KUG, wái-imbai, wimbai.
- Morinda citrifolia*, Linn.—Fruit. KYI, C. Bd., dogentcha; Ckn., tokunja; KYE, Bld., tokonjaga; KRA, ko-onjirang; KWA, alái-in.
- Musa* sp.—“Banana.” Fruit. KYE, Bld. (scrub-banana), jattermo; KYE, Bld. (forest-banana), kulnjur.
- Myrsine crassifolia*, R. Br.—Fruit. KUG, mārada.
- Nelumbium speciosum*, Willd.—Seeds broken with a stone, and eaten raw. Cooktown. Rockhampton. (E. Palmer.)
- Nymphaea caerulea*, Savigne.—
- (1.) Rhizome roasted. KYI, Ckn., C. Bd., and KYE, Bld., de-kir; KMI, alkór-ua; NGI, CHI, NGA, mō-karu; NGG, aráu-u. On the Morehead River they pass under distinct names, according as they are young or old specimens, e.g., KRA, taré-uma and andu-emma, respectively.
 - (2.) The seeds are baked in their pods, in “ovens” made of stones or pieces of ant-bed, covered with strips of tea-tree bark, over which ashes and sand are placed. When the pods become soft, the seeds are ready for eating (with their husks). The husks, however, may be removed by baking somewhat longer, rinsing the seeds in water (when some of the husks will float to the surface), pouring off the water, and grinding the mass between two stones. The mass is rinsed again, and ground again, and so alternately rinsed and ground, until such time as the water from the pasty mass is comparatively clear. KYI, C. Bd., nguri; Ckn., nganka; KMI, achá-ra; KRA, yarbadtha.
- Nymphaea gigantea*, Hook.—Rhizome and seed eaten: prepared like *N. caerulea*. E. Palmer says that the porous seed-stalk is peeled and eaten raw, also roasted. KRA, duchá-ra; KWA, angká-a; KYI, Ckn., C. Bd., nga-wuro (tuber), mumba (seed).
- Oryza sativa*, Linn.—“Wild Rice.” The plants are collected, tied into bundles, and kept some considerable time under water: at last, they are taken out, dried, shaken, and the seeds winnowed—these are then ground between two stones, etc., and the pasty mass cooked like a “damper.” KWA, anbó-a, kwang-an; MIT, mokomurdo; KRA, ari-yuma; KYI, Ckn., jikan.
- Owenia acidula*, F. v. M.—Fruit raw. MIT, eldin, uroka.
- Owenia cerasifera*, F. v. M.—Fruit (sarcocarp) eaten. (A. Thozet.)
- Pandanus aquaticus*, F. v. M.—Fruit. Mitchell, Gilbert, Palmer Rivers. (E. Palmer.)
- Pandanus*, sp.—“Bread-fruit.” “Screw-Palm.” Fruit sucked, shell broken, and seed eaten: however, unless very ripe, the fruit is roasted in the ashes previous either to sucking (it being too “hot”) or to soaking in water, which becomes sweetened and is drunk. [Armlets. Mats.] KYI, C. Bd., birko, monggan, ngurlaga; KYE, B’s. H., na-rárl; KYI, Ckn., jibugai, monggan; KYE, Bld. (fruit), jillénji; KRA, a-rárla; KWA, arú-ol; NGG, akán-dra; MAL, pi-ma; KUG, kunggi.
- Panicum decompositum*, R. Br.—Seed winnowed and ground, and cooked like a “damper.” MIT, tindil.
- Parinarium nonda*, F. v. M.—Fruit. KRA, rarn; KWA, aróra; NGG, mor-ra; KYI, C. Bd., Ckn., wo-inya.
- Passiflora foetida*, Linn.—Fruit eaten. The Cooktown blacks tell me that this plant has only come here of recent years: they call it nór-ro, a term signifying apparently any kind of creeper. MAL, bata.

- Persoonia falcata*, R. Br.—Fruit. KRA, kí-enn; KWA, arnáu-unta; KYI, Ckn., C. Bd., ta-pun.
- Phaseolus Mungo*, Linn.—Rootstock baked. (A. Thozet.)
- Physalis minima*, Linn.—Fruit. Upper Cloncurry River. (E. Palmer.)
- Piper Rothiana*, Bail.—Fruit raw. Atherton.
- Pipturus propinquus*, F. v. M.—Fruit. (A. Thozet.)
- Pithecolobium moniliferum*, Benth.—Pods roasted when young. Mitchell River. (E. Palmer.)
- Plectronia barbata*, J. Hook.—Fruit. KYI, Ckn., C. Bd., billubal; KYE, Bld., marko.
- Plectronia odorata*, F. v. M.—Fruit. KYI, Ckn., C. Bd., ngamal.
- Pleiogynium Solandri*, Engler.—“Burdekin plum.” Fruit. KYI, Ckn., and KYE, Bld., kórroi.
- Podocarpus elata*, R. Br.—Fruit. KUG, dalgai.
- Podocarpus pedunculata*, Bail.—Fruit roasted, rolled, and rubbed between two stones, mixed with a little water, and eaten. NGI, NGA, CHI, chupolla.
- Polyalthia nitidissima*, Benth.—Fruit. (The “wo-a” of Thursday Island.) NGG, manguru.
- Polygonum hydropiper*, Linn.—Flinders River natives eat the coarse stalks after being roasted and peeled. (E. Palmer.)
- Portulaca australis*, Endl.—Rootstock eaten roasted. NGG, me-nama.
- Portulaca napiformis*, F. v. M.—Seeds and rootstock eaten. PPT, karidilla.
- Portulaca oleracea*, Linn.—In the Boulia district this may be eaten raw in its entirety, or only the seed used. The latter is obtained by taking a goodly-sized bunch and rubbing it between the two hands held more or less horizontally, the seed dropping through the interdigital spaces into a wooden bowl; it is subsequently washed, ground, and eaten raw. (E. Palmer, on the Cloncurry and Mitchell, says the stalks are eaten raw or roasted.) PPT, kuni.
- Pothos Loureiri*, Hook. et Arn.—Fruit eaten after roasting at Atherton, but raw on the Tully. NGI, CHI, NGA, kuyu; MAL, koi-yo.
- Psoralea badocana*, Benth.—Roots eaten, after being scraped and roasted. KRA, a-méga; KWA, alpá-rara.
- Psychotria Simmondsiana*, Bail.—Fruit. NGI, bulbono; CHI, NGA, bonbono.
- Pygeum Turnerianum*, Bail.—Nuts eaten. On the Bloomfield River, it is in season from January to March. It is only used quite fresh, as the fruit-husk must be over the shell. The whole thing—fruit-husk, shell, and kernel—is pounded up together, sifted through a palm-tree dilly-bag, after which the resulting meal is damped, kneaded into cakes, wrapped up in wild-ginger leaves, and baked in the ashes (R. Hislop). KYE, Bld., junda.
- Randia Fitzalanii*, F. v. M.—Fruit. KYE, Bld., kú-mar (where it is eaten raw when ripe: baked in the ashes when green—R. Hislop); KYI, Ckn., pepájarin.
- Rhaphidophora Lovellæ*, Bail.—Stems. MAL, najá.
- Rhodomyrtus macrocarpa*, Benth.—Fruit. KYI, C. Bd., wannakai; KYI, Ckn., kálbarjir; KYE, Bld., kalburadji (where it is eaten raw, or baked in the ashes—R. Hislop); KUG, yaruju; MAL, yaran.
- Rubus rosafolius*, Sm.—Fruit. (A. Thozet.)
- Santalum lanceolatum*, R. Br.—Fruit. Cloncurry, etc. (E. Palmer.)
- Sarcocephalus cordatus*, Miq.—“Leichhardt tree.” Fruit. KYE, Bld., and KYI, Ckn., ká-pal; KMI, KRA, pó-anja; KWA, almáu-ur; MAL, puru-puru.
- Schmidelia serrata*, DC.—Fruit. KRA, ní-ira; KYE, B’s. H., win-ya; KUG, panguru.
- Scirpus littoralis*, Schrad.—Roots eaten, after roasting and hammering. KYI, Ckn., kalpara, pá-ral; NGG, pró-atha; Red Island, au-gútanara.
- Semecarpus australiensis*, Engler.—Ripe fruit picked off the ground, skewered, roasted on ashes, and eaten. If eaten raw, produces sore lips, and if on broken skin, said to produce pain and swelling. KUG, wagara; KYI, C. Bd., dalmba; KYI, Ckn., jalmba.
- Sideroxylon Brownlessianum*, F. v. M.—Fruit. KYE, Bld., wanakan.
- Sideroxylon chartaceum*, F. v. M.—Fruit eaten (after roasting at Atherton: elsewhere) raw. NGI, CHI, NGA, moi-ári; KRA, á-li; KWA, á-lian; KYI, Ckn., pálaka.
- Siphonodon pendulum*, Bail.—Fruit. KYI, Ckn., C. Bd., bambubal; KMI, agúridal; KRA, ngarwowóya; KWA, altira-ún-ga.
- Solanum esuriale*, Lindley.—Fruit eaten raw and roasted. Cloncurry, Flinders River. (E. Palmer.)
- Sporobolus actinocladius*, F. v. M. This is cut down, tied into small bundles, taken down to the nearest waterhole, and dipped under, just for a minute or two: the bundles are next laid out to dry in the sun for a quarter of an hour or so, but to prevent the desiccation taking place too rapidly, especially on a very hot day, they may be covered over with some other grasses or bushes. When the moisture has been sufficiently removed, each bundle is firmly held by the stalk-portion with one hand, while the head-portion is gently brushed over and squeezed with the other, the seed so loosened being allowed to fall into the water contained in a wooden bowl beneath. The water is drawn off subsequently by tipping up the vessel, and so letting the fluid escape through the interdigital spaces of the hollowed hand; the seed itself is then dried again before being ground and made up into a “damper.” PPT, katura.
- Sporobolus indicus*, R. Br.—Prepared similarly to the preceding. MIT, jílgrubari.
- Sporobolus Lindleyi*, Benth.—Prepared similarly to the preceding. PPT, yákkapari.
- Sterculia caudata*, Hew.—Fruit, roasted and eaten. [Fibre-twine.] KRA, ní-alkal; KWA, kellan; KYI, Ckn., kormun (though not now met with here).
- Sterculia Garrawaya*, Bail.—Fruit. KMI, morna.
- Sterculia quadrifida*, R. Br.—Seeds raw: roots roasted, and, after the skin is broken, eaten. [Fibre-twine.] KYI, C. Bd., gorarbar; KYI, Ckn., koralba; KUG, mam-bin; NGG, mbé-a.
- Sterculia ramiflora*, Benth.—Seeds roasted. KRA, al-mún; KWA, an-gí-a; KYI, Ckn., jimmar (but not found in neighbourhood now).
- Sterculia rupestris*, Benth.—Roots of the young trees are eaten, mostly over all North Queensland. (E. Palmer.) Seeds eaten.
- Sterculia trichosiphon*, Benth.—Roots of young trees eatable, also seeds. (A. Thozet.)

Tacca pinnatifida, Forst.—Tubers eaten. On the Bloomfield, etc., this tuber is baked in the ashes, mashed up, rolled in ginger-leaves, and then baked (R. Hislop). At Red Island it is soaked, hammered, and roasted. On the Morehead and Musgrave Rivers, I have seen it prepared as follows:—The tubers are rubbed up against a rough stick, see Fig. 4 (acting after the method of a “nutmeg-grater”) into a bark-trough containing water. The mixture is next put through a “sieve” formed of an infolded dilly-bag; it is squeezed through this into some fresh water contained in another trough. Here it is allowed to settle, for which some time is required, then washed once or twice, the water allowed to run off, and the remaining sediment scraped up with a shell, and then cooked in hot ashes like a “damper.” At Cape Grafton, the tubers are pounded between stones, put in water all day, the sediment removed and cooked on hot ashes. On the Palmer, it is prepared as on the Morehead and Musgrave; but when the white mush has settled in the final washing, the water is carefully drawn off, and the mess very gingerly poured onto some sand, which allows the fluid to percolate through. This white mess, now fairly coherent, is next taken in the hand and made a ball of. After being roasted in the ashes for some few minutes, its hardened exterior is skinned off, Fig. 5, the (inner surface of this) peel being again put on the ashes. The ball itself is again similarly roasted, peeled, and so gradually made up into something like four or five “pancakes” which, after roasting, are then ready for eating. On the Pennefather River, it is scraped onto a rough piece of wattle bark, like a nutmeg scraper, into a shell. Then collected on to a thick bundle, 2 to 3 inches thick, of fine dead grass (sp. of *Parotis* and *Panicum*) as a strainer, and water poured on until all the cellular *débris* is left behind. The milky water is next allowed to settle, perhaps a day, the clear water run off, and the remaining flour then dried and carried about in a big hard ball. Then scraped off as wanted, and roasted on the hot stones like a pancake. KYI, Ckn., wá-tan; KYE, Bld., pí-anggal; KRA, angki-yu; KWA, arvó; KMI, alkó-inba; KUG, chul-ngo, chulu-kono (small variety); NGG, ní-u; Red Island, antitha.

Terminalia catappa, Linn.—Fruit: the shell is broken, and nut eaten raw. KYI, Ckn., C. Bd., tommin; NGG, anyu-o.

Terminalia microcarpa, Dcne.—Fruit. NGG, draiputo.

Terminalia oblongata, F. v. M.—Fruit. (A. Thozet)

Terminalia platyphylla, F. v. M.—Fruit raw. Flinders, Cloncurry, Gilbert, Mitchell Rivers. (E. Palmer.)

Terminalia sericocarpa, F. v. M.—Fruit. KYI, C. B., ngó-go-ro; KYI, Ckn., ngorkuru; KYE, Bld., jinjaljala.

Tribulus Solandri, F. v. M.—Roots eaten, roasted. NGG, longarate.

Trichosanthes palmata, Roxb.—Yam or rootstock roasted and eaten. Cloncurry. (E. Palmer.)

Triglochin procera, R. Br.—Tubers eaten, baked. KYI, Ckn., C. Bd., wanna; KRA, anámun; KWA, anéma.

Typha angustifolia, Linn.—Young leaves and roots are edible. (E. Palmer.)

Typhonium angustilobium, F. v. M.—The tubers are roasted and broken with a stone, pounded a good deal, and roasted several times before using. Mitchell, Lynd, and Pennefather Rivers. NGG, wu-ri.

Typhonium Brownii, Schott.—Tubers eaten. If raw, they produce a burning sensation like a chili. They are roasted for a minute or two on the ashes, then pounded between two stones, roasted again and pounded, and so alternately for a good ten minutes or more until they come out finally of the consistency of a piece of indiarubber. KWA, tá-lamba, alké-imba; KRA, algain-ba; KYE, B's. H., kammi; KYE, bandjai; KYI, Ckn., mallamú-ga.

Vigna lanceolata, Benth.—Roots eaten. MIT, malaga.

Vigna lutea, A. Gray.—Roots eaten, roasted. KRA, andáu-ga; KWA, ará-ra; KYE, B's. H., balcha; KYI, Ckn., pá-po-in.

Vigna vexillata, Benth.—Roots roasted. NGG, to-e.

Vitex glabrata, R. Br.—Fruit. KYI, Ckn., C. Bd., koná-ra; KYE, Bld., wong-ur.

Vitis acetosa, F. v. M.—Fruit eaten raw by the Cooktown blacks. Rootstock hammered and roasted, eaten by the Koko-rarmul and Koko-wara (not by Cooktown) natives. KYI, Ckn., kang-ga, C. Bd., gang-gu-rur; KYE, B's. H., mon-dol; Bld., gang-a; KMI, achealla; KUN, rábbab; KWA, anjigal; KRA, ná-ya; NGG, mbáu-nu.

Vitis clematidea, F. v. M.—Rootstock eaten, after roasting, hitting between stones, etc. KYI, Ckn., morber; C. Bd., bu-yan.

Vitis opaca, F. v. M.—Rootstock roasted at Cooktown: berries eaten at Red Island. KYI, Ckn., pinnaka; Red Island, ampo-ana.

Vitis trifolia, Linn.—Rootstock eaten. Roasted on the ashes lying over heated ant-bed “chunks” or stones. The ashes are subsequently removed, the roots left on the ant-beds, etc., and covered with a sheet of tea-tree bark, over which are placed ashes and sand, and left to bake. The thick cortical substance is removed before eating. KMI, lorwora; KUN, takking; KRA, tampara; KYE, B's. H., pulkun; KWA, lenn.

Xanthorrhoea arborea, R. Br.—“Grass-tree.” The bases of the young leaves are eaten raw; also the extremities of the young shoots. KMI, kwanja; KWA, an-gá-tan; KRA, rarnka; KYI, Ckn., C. Bd., pongga; KYE, Bld., ngang-ir.

Ximenia americana, Linn.—Fruit. KUG, gotoba, kai-ko.

Zizyphus jujuba, Lam.—Fruit. (A. Thozet.)

10. Ants.—Green ants, as well as their larvæ, are eaten as food both by men and women, and at Princess Charlotte Bay, Cooktown, Bloomfield, etc., are in addition used as medicine (e.g., in diarrhoea, headache, etc.). At Princess Charlotte Bay and Cooktown, I have seen the nest cut down and opened on a piece of stone or rock whence the green ants scatter about in all directions, leaving the white larvæ behind. Any remaining ants are removed by putting the fingers into it, letting them crawl up the arm, and rubbing them briskly off. The white larvæ are then collected into more or less of a ball, rubbed a bit between the flats of the hand, and swallowed. If in large quantity, and a “big feed” wanted, the larvæ from two or three nests are collected into one big ball, crumpled over with leaves, washed in water, and then eaten. The “washed” water may be also drunk. At Cape Bedford, ashes are put into the water

when the ants are kneaded. On the Bloomfield (R. Hislop), the nests are pulled down and their contents shaken into a piece of bark or large leaf, and are slightly kneaded so as to prevent the grown ants getting away. The mass of squashed ants and eggs is then squeezed into a trough containing water, which makes the water look as if milk had been added to it. This liquid is sopped up by means of chewed grass, while the remains of the ants and eggs are eaten. Saltwater is preferred to fresh to mix the ants up in, and the nests are considered more palatable when there is a preponderance of eggs over ants. The "queens" are eaten without being squashed. It is interesting to note that on the Bloomfield, as well as at Cooktown, etc., the chrysalis of a lepidopteron, *Lyphira brassolis*, is found in the green-ant nests. The Bloomfield blacks, who call it bi-i bi-i, consider it a great delicacy, while the Cooktown natives, who speak of it as ged-ya, break it up in water, drink the mixture, and say it is very good for bad constipation. The lower Tully River natives utilise the green ants mainly as food, but also as medicine. The insects—the young larvæ at least—are either squashed up in water and drunk or else rolled up, in the dry, in "wild-ginger" leaves and baked.

White ants, as well as green, are eaten in the Cloncurry and Boulia districts raw. The individual stands or stamps upon an ant-bed from which these creatures will run up his legs and thighs and get scraped or swept off as they come up and as quickly transferred to the mouth.

The larvæ of certain small black ants are also eaten raw or baked on the lower Tully.

11. Bees (Honey). Wasps (Larvæ).—To learn where the honey is, bees may be hunted by sight. In the N.W. Central districts honey is sought for by one or other of the following methods:—Its locality in the particular tree is tracked, during the winter time by watching carefully for the minute pellets of dung lying on the ground around the butt; in the summer months by observing the bees going in and out of their nest, and on occasion by putting the ear down to some natural orifice at the base of the tree and listening for the insects' hum and buzz. The trunk is often tapped lightly with the fingers, or with a stone, for indications of a hollow core—a likely situation for a nest. On the (middle) Palmer the insect may be caught in the open, when its body will be smeared with iguana or snake-fat, and some hawks', etc., feather-down stuck on: it is then let loose and followed home. (Inspector Marrett says that he saw a Bowen boy following this method in 1874 on the Herbert River.) The Tarkalag blacks on the Lynd River during the wet season locate the nest by watching for the pellets of dung at the foot of the tree. In the Princess Charlotte Bay district the aboriginals distinguish the young from the old brood. Honey from the former is considered a special delicacy, and reserved usually for the elder men. The lower Tully blacks collect honey from one species of bee only: this is usually mixed with water and drunk, but never kept long enough to ferment. When once the honey is found, mops and sponges (to be subsequently described) are very commonly employed to get it out and so save the labour of cutting away the timber, etc. I have not met with English bees anywhere to the west or north of the Jeannie River (Princess Charlotte Bay). South of this, the blacks here and there "smoke" them, having probably seen the example set by Europeans.

Wasps' larvæ are eaten on the lower Tully, and obtained as follows:—The nest is guardedly sneaked up to, and a bundle of fired grass or tea-tree bark held just underneath: this kills or puts to flight the mature insects, when the comb is immediately pulled, and the larvæ picked out and eaten raw.

12. Other Insects, Grubs, Caterpillars, etc.—Certain longicorn Coleoptera are eaten by the natives on the upper reaches of the Embley River. March flies are often treated similarly with by the Tully River children, etc. Grubs are hooked out of tree-butts and roots by means of the "feelers" of the lawyer cane (*Calamus*), or else by sawing into soft and rotten timber with a piece of lawyer after the manner of a crosscut, Fig. 6. Both procedures are in vogue on the lower Tully, where the blacks eat these grubs raw or roasted. In the Boulia and Cloncurry districts the smaller kinds of grubs and caterpillars, especially those found on grass (MIT, PPT, kapara), may be eaten raw and whole: the larger varieties, found in trees (PTT, kalorangoro), are usually roasted, their heads not being eaten, or may be dried in the sun and put away for future occasions. E. Palmer states that on the Mitchell and Cloncurry the natives utilise a grub contained in the galls growing terminal on young trees of *Eucalyptus tetradonta* and *E. corymbosa*.

13. Crustaceans.—On the lower Tully River, shrimps and prawns are caught by two or three different means. In the river, when about half-flood, women will wade in and root up with their hands the bundles of water-grass, which they throw on to the bank: in and out among the blades of grass so uprooted they then pick up the crustaceans. Again, when the river is similarly at half-flood, women may take a dilly-bag with them into the water, and, putting the mouth of this vessel close onto one side of each tussock, drive the shrimps into it by a movement of the hand held on the other side. At the mouth of the river, at certain tides—e.g., spring-tides—these animals swarm in such numbers as to give a reddish appearance to the water-surface, and come in close towards the beach. When they do so, the blacks (males) wade in and scoop them up into very long wicker (split lawyer-cane) baskets: these are known locally as chuta, and are made up to 10 and 12 feet long on similar pattern to the fish-baskets of Atherton (Sect. 15h). Shrimps and prawns, besides being utilised as bait, are eaten subsequent to baking in ginger leaves or tea-tree bark.

Crayfish are caught with the hands, in nets, or, as on the Musgrave, etc., in logs (sect. 15g).

Crabs in many districts are, as a rule, only hunted for by women and youngsters. At Cape Bedford, crabs are believed to be no good except when caught at the full moon; at other times they are certainly not sought for here, though were one to be accidentally met with it would assuredly be captured and eaten.

14. Molluscs.—The accompanying list of edible molluscs must be accepted with similar reservations as already notified with regard to plants. The large majority of these shell-fish are roasted in the ashes: a few may be eaten raw.

Anomia elyros, Gray.—NGG, ngarmbunya.

Arca granosa, Linne.—Embley and Hey Rivers.

Arca navicularis, Bruguiere.—NGG, ko-clana.

Arca pilula, Reeve.—NGG, arú-itidi. [Also for baby-rattles.]

- Arca scapha*, Chemnitz.—NGG, té-uma, arú-teri; KYI, C. Bd., woggo; KYE, Bld., bu-e; KUG, jamba ko-ialla.
- Arca semitorta*, Lamarck.—KYE, Bld., gal-gil; KUG, changurai.
- Asaphis deflorata*, Linne.—KYE, Bld., gir-bar.
- Atactodea mitis*, Deshayes.—NGG, andró-e; KUG, kerpo.
- Auricula aurisjudæ*, Linne.—KYE, Bld., yalu-babbinja.
- Cardium vertebratum*, Jonas.—NGG, mó-anga-i. [Also used as a painter's graining-comb in painting the body.]
- Cassidula angulifera*, Petit.—NGG, mó-i.
- Cassis areola*, Linn.—Kye, Bld., bung-on.
- Cassis coronulata*, Sowerby.—NGG, pera-te; KUG, chi-nginya.
- Chama pulchella*, Reeve.—NGG, trainapu-gwe.
- Circe gibbia*, Lamarck.—KUG, te-rangai.
- Circe scripta*, Linne.—KUG, koi-koi.
- Conus trigonus*, Reeve.—NGG, dé-vi dé-vi. [Large-sized ones after chipping, etc., form chest ornaments.]
- Cultellus* sp.?—KUG, bilka.
- Cypræa arabica*, Linne.—KUG, kunggaga.
- Cyrena jukesii*, Deshayes. [Also scraper, drill, bark-cutter, etc.] MAL, magore; NGG, on-yi; KYI, C. Bd., do-angka; KUG, mokere; Ckn., bain-bai; KYE, Bld., dargai, yulba.
- Cytherea gibbia*, Lamk.—KYI, C. Bd., barmor; KYE, Bld., ngolo-moko.
- Cytherea meretrix*, Linne.—NGG, andró-i.
- Dolium latisulcatum*, Martini.—KUG, ke-a-wai.
- Dolium variegatum*, Lamk.—KUG, ger-we.
- Donax faba*, Chemnitz.—NGG, adú-ichimba-gwe; KUG, chulkai.
- Donax lineolatus*, Valenciennes.—KUG, be-a.
- Fusus proboscoidalis*, Lamk.—NGG, pundara. [Nose-pins, water-vessels.]
- Glyphus* sp.—NGG, ngar.
- Gyrineum affine*, Broderip.—KUG, ku-in-gan.
- Haliotis ovina*, Chemnitz.—KYI, C. Bd., kana-ungkun.
- Latirus craticulatus*, Linne.—KUG, yawara.
- Littorina filosa*, Sowerby.—KUG, moigor-moigor.
- Lutraria philippinarum*, Deshayes.—NGG, cheranganama.
- Macra dissimilis*, Deshayes.—NGG, dó-wawanna.
- Macra maculata*, Chemnitz.—KUG, chi-boi.
- Macra obesa*, Deshayes.—NGG, tré-a.
- Malleus vulsellatus*, Lamarck.—NGG, ton-dro.
- Meleagrina margaritifera*, Linne.—NGG, wú-idi. [Forehead bands, etc.] KYE, Bld., mi-laur.
- Melina Cumingi*, Reeve.—KYE, Bld., jonaron.
- Melo diadema*, Lamk.—NGG, pé-ra. [Wommera-hafts, vessels, etc.] KYI, C. Bd., dir-kai; KUG, ji-gai.
- Meretrix erycina*, Linne.—Cape Bedford.
- Mitra caffa*, Linn.—KUG, jú-go-gan.
- Mitra vulpecula*, Linne.—KUG, kwinggan.
- Modiola albicostata*, Lamarck.—NGG, láng-anana.
- Monodonta labio*, Linne.—KYI, C. Bd., bai-tchen.
- Murex adunco-spinosus*, Beck.—Cape Bedford.
- Murex adustus*, Lamarck.—NGG, damandama.
- Mytilus hirsutis*, Lamarck.—KUG, mokul-mokul.
- Mytilus horrida*, Dunker.—NGG, wí-pi-che; KYI, C. Bd., moi-yor-gin-gil.
- Nassa unicolorata*, Kiener.—NGG, trú-no.
- Natica bicolor*, Philippi.—NGG, ró-anggate; KUG, ko-inggar.
- Natica mamilla*, Linne.—KUG, kúlgarabara.
- Natica plumbea*, Lamarck.—KUG, morol-morol.
- Nerita costata*, Chemnitz.—KYI, C. Bd., moku-burnu.
- Nerita lineata*, Chemnitz.—NGG, tó-ri; KYE, Bld., ngara-kadja.
- Nerita planospira*, Anton.—KYE, Bld., moko-darai.
- Oliva ornata*, Marrat.—KUG, tabul.
- Oliva tremulina*, Lamk.—KUG, kúngaga.
- Ostræa glomerata*, Gould.—NGG, kantaga; KYE, ni-gar.
- Ostræa mordax*, Born.—KYE, Bld., gi-run, warbo.
- Ostræa mytiloides*, Lamarck.—KUG, je-rom.
- Ostræa nigromarginata*, Sowerby.—KUG, challa.
- Pecten gloriosus*, Reeve.—NGG, nyuro-nyunama.
- Perna Cumingii*, Reeve.—KUG, we-ta. [Also for knives and fish-hooks.]
- Pinna menkei*, Hanley.—NGG, tai-peri.
- Placuna placenta*, Linne.—NGG, ngármarate; KUG, wi-ro.
- Potamides fuscum*, Schumacher.—KYI, C. Bd., wa-dur.
- Potamides semisulcatus*, Boltou.—KYI, C. Bd., ta-galgal; KYE, Bld., bar-bi.
- Psammobia bessonii*, Blainville.—KUG, tualim.
- Pterocera lambis*, Linne.—KYI, C. Bd., manigai.
- Purpura amygdala*, Kiener.—NGG, trú-no.
- Purpura bufo*, Lamarck.—KUG, kipaga.
- Purpura hippocastaneum*, Lamk.—KYI, C. Bd., wandi-ngan.
- Pyrula foliacea*, Linne.—NGG, pandara-te.

Solarium perspectivum, Linne.—KUG, charin.
Spondylus Victoris, Sowerby.—Cape Bedford.
Spondylus violascens, Lamk.—NGG, nyú-ro-gwe.
Strombus Campbells, Gray.—NGG, yúng-ko. [Also for baby rattles.]
Tapes hiatinus, Lamk.—NGG, yé-e.
Tapes Schnelliana, Dunker.—NGG, arón-jo.
Tellina sulcata, Wood.—KUG, koi-iko.
Tellina truncata, Jonas.—NGG, lai-kana.
Thersites Barneyi, Cox.—NGG, tó-ri.
Thersites bipartita, Ferussac.—KYI, Ckn., ko-mo ; NGI, kau-al.
Trochus bicarinatus, Angas.—NGG, an-gár-gana.
Trochus niloticus, Linne.—KYI, C. Bd., dobbi.
Turbo foliaceus, Philippi.—NGG, in-jú-tru.
Turbo porphyrites, Martyn.—KYI, C. Bd., da-ra.
Turritella cerea, Reeve.—NGG, mbrurr-i.
Unio sp.—KUG, wambiram.
Venus Lamarekii, Gray.—NGG, bá-angkana.
Venus puerpera, Linne.—NGG, on-yi-te. Cape Bedford.
Venus striata, var. *caledonica*, Bernardi.—KUG, ko-pun.

15. Fish are caught by one or other of the many following methods :—

- (a) **Transfixion with the feet** is common on some portions of the Georgina River, and in certain other creeks, wherein the aborigines will grope carefully along the mud, and so transfix with their feet a sort of "cat fish" to be found there.
- (b) **Muddying or Puddling** of the water by the feet, in small shallows, and hitting or spearing the fish as they come up, is a common procedure everywhere.
- (c) The practice of "**Poisoning**" the water by special plants and capturing the fish as they rise to the surface is fairly common. The following constitute some of these so-called fish-poisons :—

Acacia salicina, Lindl., v. *varians*.—"Mentioned by Sir T. Mitchell for poisoning the fish in small lagoons, and Mr. Hill says that the natives of the Fitzroy River (Q.) put it to a like purpose." (J. H. Maiden, *Agricultural Gazette*, New South Wales vol. 5, 1894, p. 470.)

Adenanthra abrosperma, F. v. M.—The bark is thrown into the water. (middle) Palmer River. KMI, rokowara.

Barringtonia racemosa, Gaudich.—The bark is hammered between stones till it gets quite spongy, and then taken into the water, where it is rubbed with the hands. Fish are stupefied in about a quarter of an hour. Bloomfield (R. Hislop), Cooktown. (E. Palmer speaks of its use on the Mitchell, Laura, and Lynd Rivers.)

Careya australis, F. v. M.—The leaves are used on the (middle) Palmer River as also on the Gulf Coast between the Nassau and Staaten Rivers. "Bark of the root is used as a fish-poison beaten up fine J. Morrell mentions the same of the blacks on the Burdekin. They used the bark of the stem to poison fish in fresh water, and the bark of the root for salt water."—(E. Palmer.)

Derris uliginosa, Benth.—The stems are hammered on a stone or log (during which operation there emanates a peculiar smell), put up into bundles and roasted, and finally thrown into the water which it renders more or less soupy. It is thus used at Cooktown : on the (lower) Tully River the leaves are rather employed, especially for eels. KYI, Ckn., mokorja ; MAL, mara.

Diospyros hebecarpa, A. Cunn.—Numbers of the fruit are collected and tied up into long bundles ; each black takes a bundle, warms it over a fire, and then squashes it in the water. Cooktown, Cape Bedford, Bloomfield, Cape Grafton. KYI, Ckn., C. Bd., ko-lin ; KYE, Bld., ngam-boi ; KUG, juluka.

Eucalyptus microtheca, F. v. M.—In the North-West Central districts, especially in large water-holes, I have often watched the process. The whole camp may co-operate, and will start throwing the leafy boughs and branches in, first thing of a morning ; during the day the water becomes darker and darker and strongly-smelling until by the following morning at sunrise, when it is almost black, the fish all lie panting at the surface, and are easily caught.

Eucalyptus resinifera, Sm.—The leaves are thrown in, and left for from one to three days according to the size of the pool. (middle) Palmer River. KMI, ro-angga. These same blacks also employ another *Eucalyptus* (KMI, bwanal)—an "iron-bark"—in similar manner, and acting more rapidly.

Faradaya splendida, F. v. M.—Used for small fish in water-holes which are drying up. MAL, buku.

Galactia varians, Bail.—The bark is used on the Musgrave River. KRA, mornilian.

Garcinia Cherryi, Bail.—Bark, etc., put into water from midday to sunset. NGI, NGA, CHI, jo-wor.

Luffa ægyptiaca, Mill.—"Used to poison fish when green. Mitchell, Gilbert, and Einasleigh Rivers." (E. Palmer.)

Melia composita, Willd.—A plant employed on the (lower) Tully River by the Walmal blacks, who speak of it as kilvain. The bark, leaves, and other tender parts are broken up so as to get the juice to exude : it acts fairly rapidly.

Polygonum orientale, Linn.—"Mr. C. Hedley has a note in the Proc. Roy. Soc. Qu. vol. 5, in which he states that a species of *Polygonum*, probably *P. orientale*, was pointed out to him as one of the plants which the Port Curtis blacks use in obtaining fish, and that when a quantity of it is pounded up and thrown into a water-hole it rapidly brings all the fish to the surface in a dying condition, without impairing their wholesomeness as food." (J. H. Maiden, *op. cit.*)

Pongamia glabra, Vent.—After being roasted, the roots are beaten up on a stone, tied into bundles, and thrown into the water, which turns somewhat greenish : it is put in of an evening, and left there all night. Cooktown, Cape Bedford, and Princess Charlotte Bay. KYI, Ckn., korar ; C. Bd., yega ; KRA, KWA, jo-ara.

Stephania hernandiæfolia, Walp.—Bruised stems, cut in lengths of about 2 feet, are scattered about in the water of the pool. Nerang Creek, S. Queensland. (J. Shirley.)

Tephrosia astragaloides, R. Br.—Its leaves are crushed and bruised, and whole bundles full thrown into the water-hole, which may be waist-deep and 20 to 30 feet in diameter. Cloncurry, (upper) Flinders River, etc. MIT, tuta.

Tephrosia rosea, F. v. M.—For fresh-water lagoons. The roots are hammered in the dry, and in large numbers collected into dilly-bags. These are here and there dipped in the water, and, when their contents are moistened enough, the bruised roots are taken out of the bags and thrown into the pool. A fairly rapid method. Pennefather River. NGG, to-uma.

There are some three or four remaining plants already known to me, but which I have not yet been able to get identified:—

Ne-ro (NGG).—Used on the Pennefather River and neighbouring districts in the salt and brackish lagoons. Branches of this are hammered in the dry, and tied up into a bundle around a central stick to hold it with. This is then dipped under the surface of the water, where it is hammered upon by another stick, and the procedure repeated here and there, according to the size of the pool. Finally, as many green ants' nests as possible are thrown in.

Wi-ar.—Name given it by the Walmal coastal blacks at mouth of Tully River. Leaves broken up with the hands, and thrown into small pools. A very rapid method, and said not only to stupefy, but to kill the fish in time.

Kurgan (MAL).—Berries, after being smashed, are put into a dilly-bag and shaken up: the bag is then bobbed here and there in the water. Employed by the scrub blacks of the (lower) Tully River.

Pindirin.—Roots are utilised by aboriginals of (upper) Tully River.

(d) **Bobbing**, especially for eels, is a practice met with on the (lower) Tully River. The bait used is a certain ground-worm, up to from 6 to 8 inches long, found under rotten logs and stones. A finely split lawyer-cane is shoved right through the animal, from end to end, and a string attached to the extremity of the cane. Several—up to a dozen—of such impaled worms are thus prepared and tied at their stringed extremities to a main cord attached to the end of a short stick. At night-time, in the neighbourhood of a fire on the banks, this tassel-like bait is bobbed in the water, the hunter waiting until such time as he feels an eel taking a good bite—i.e., fixing its teeth well in. So soon as he is certain of this, he jerks the implement over his shoulder, and with the impetus brought into play the fish is thrown onto the bank. Another method of preparing the bait, without any impaling, is just to thread several of these worms through the head and tail of each, the thread being tied at its extremities, and all the worms brought together into one bunch: the string is next attached to the end of a stick, as before. In this same district, bobbing with a spider's web is employed for catching small fry—viz., fish from 1½ to 2 inches long. There is a very large spider to be met with in these (lower) Tully River scrubs which is known to the Mallanpara as the karanjamara. When the native finds its web, he first of all catches and kills the spider, but carefully preserves its abdomen. He next takes a stick, and with its tip just touches the web all round and round—commencing at its outer limits—and so, gradually defining a smaller and smaller circle, winds more and more of the web onto his stick; he twirls at the same time as he circles, with the result that the spider-web "twine" coiled at the end of his stick derives no inconsiderable amount of strength. The free extremity of this natural twine is dipped into the mucky mess within the animal's abdomen, and then bobbed onto the surface of the water. The fry bite at it very readily, and with each bite its teeth or jaws get stuck together and so hauled out. The twine is dipped again, and the process repeated *ad lib.* Both men and children engage in this bobbing for small fry: it is certainly a very rapid method.

(e) On the coast-line in the neighbourhood of the Tully River, the **Sucker-fish**, *Remora*, is utilised as a guide for spearing or harpooning fish, as well as turtle and dugong. This sucker-fish, known to the Mallanpara blacks as kamai, is found usually on the rocks at the outlying islands, and sometimes stuck on their own canoes. It is removed, kept in a canoe, bark-trough, etc., with a little water, and left there for a few days. Then, going out to sea, the native ties a fine twine round the *Remora's* tail, and as soon as he sights any big fish, turtle or dugong, advances his canoe as far as possible, and drops the sucker-fish overboard. In all probability, the sucker will go straight for the object and attach itself: it acts only as a guide, and tells the hunter the next move of his prey. The aboriginal now plays the line out very guardedly, draws it in with equal care and caution, and as soon as the length submerged reaches a point on the line, previously marked, he knows that he is within striking distance, and, as his quarry comes to the surface, uses the spear or harpoon accordingly. It must be borne in mind that in no sense does the sucker-fish pull the prey into the hands of the hunter: it only indicates the direction in which the harpoon, etc., can be advantageously thrown. There is a record by Jardine, I believe—but the reference is not available to me—of the *Remora* being put to a similar use by the natives in the early days of Somerset (Cape York).

(f) **Fish-hooks** vary both in shape and material of construction, and are fast being replaced by the European article. Weights or sinkers are never used. The most primitive form of hook would appear to be that met with among the scrub-blacks of the (lower) Tully River, which is nothing more nor less than the tendril of the *Hugonia Jenkinsii*, F. v. M., a good illustration of the adaptation of a natural form. As the plant (MAL, katakarkal) gets old, these tendrils become very strong and hard, when they are ready to be removed and attached to the line. The bait, generally shrimp, sometimes small crab, etc., is always tied onto the hook, never transfixed: furthermore, no matter the nature of the bait, it is invariably chewed before use. Similar tendril hooks have been observed among the Geraldton natives. Indeed, both on the Tully and at Geraldton these hooks have been imitated in shape with iron, telegraph, etc., wire, after bending and fling down. Pearl-

shell hooks, of a crescentic shape, I have seen at Cape Grafton and on the (lower) Tully River: at the former locality (in 1898) I witnessed one such during its whole course of manufacture. At Cooktown and neighbourhood nothing is known about hooks of any description to the present-day aborigines, though certain statements in Lieutenant Cook's Voyages make it clear that the Endeavour River natives originally used them. Tortoise-shell (and cocoanut) hooks were employed by the Keppel Islanders on the occasion of my stay with them in 1897, but were at that time apparently unknown to the neighbouring mainland and (lower) Fitzroy River blacks. The hook (ai-ya) of like crescentic type and up to as much as an inch in its longer diameter has the points very close together; it is attached to the line (angkun) by means of a connecting tea-tree twine (ren), the free extremity of which ties on the bait, usually a small soldier-crab (ranga)—none of these crescentic-shaped hooks ever transfixes the bait. (The soldier-crabs are caught on the sands by just placing across their line of march any stick or twig, against which they stumble and cluster, whence they can easily be bundled up into a dilly-bag.) Sub-Inspector Garraway tells me that he saw similarly-shaped tortoise-shell fish-hooks used on the Herbert River in 1883. On the Batavia and Pennefather Rivers, however, the shape of the tortoise-shell hook reminds me of an ordinary bent pin, as used for catching "tiddlers" in childhood days. At Mornington Island I found a 1½-inch nail—with its extremity ground and bent into a crescent—used as a fish-hook. At Princess Charlotte Bay, and along the rivers flowing into it, the hook (KWA terwa, KRA tarubal) consists of a tapering pencil of hard wood, usually *Erythrophloeum Labouchei*, to the attenuated extremity of which is attached, at a very acute angle, a pointed slip of bone. The particular bone utilised is that obtained from the emu, native-companion, or kangaroo: its material of attachment is kangaroo-tail tendon, and *Grevillea gum-cement*. The line, which I have only noted as being manufactured here from *Livistona australis* fibre-twine, is attached and fixed with similar means. On the Palmer River, the hook (KMI, kora) is similar to the preceding—a wooden shank and bone barb: the latter is made either from kangaroo-bone, or from one of the spines of the "cat-fish."

- (g) **Hollow logs** are in great evidence for (cray-fish), eels, and certain fish somewhat resembling "rock-cod," on the hinterland and coast-line of Princess Charlotte Bay. These hollow logs, of *Melaleuca* sp., *Eucalyptus corymbosa*, etc., vary from 4 to 6 or 7 feet in length—some thick, some thin—and are thrown into the water-holes, where they are left for, say, three or four hours, perhaps all day, or until such time as the hunter happens to be passing that way again. At any rate, when it is considered time sufficient, the fisherman will either tread the water, or, if too deep, dive down until he finds the log lying below. This he brings to the surface at an angle, with one hand closing the lower aperture. In this position, notwithstanding the weight of its contained water, the log is brought up to, and held above, the surface, when the contents are allowed to trickle out through the fingers of the hand closing the lower end: whether any fish, etc., is, or is not, inside can thus be easily and quickly ascertained. The first occasion upon which I observed this method of fishing was in November, 1898, at a pool about 18 miles from the Musgrave Telegraph Station, where at one and the same time some ten or twelve lads were working these logs. Both on the North Kennedy, and the (lower) Normanby Rivers I passed several water-holes which showed signs—by the number of logs lying on their banks—of the manner that they had been fished in.
- (h) **Baskets and Cages.** On the (lower) Tully River, women catch large quantities of small fish, probably fry, with their every-day lawyer-cane dilly-bags. These little fish, during flood time, travel up stream, as close as they can get to the river-bank—following all its indentations—in a column about a foot wide and equally deep. Women bend over at a convenient spot and put down a dilly-bag which, though breaking the advancing column for a minute or two, soon gets full; the process can be repeated time after time. [The tiny creatures are finally tied up in wild-ginger leaves ready for baking.] At Atherton, as well as on the Barron, Russell, and Mulgrave Rivers, special baskets are manufactured on lines similar to that already described by me (see Bulletin No. 1, Sect. 29). They measure up to between 3 and 4 feet in length, and up to 6 or 7 inches in diameter, and are made of mesh varying according to the size of fish, usually eel, it is desired to trap, Fig. 7. When in use, the cage is laid lengthwise, in a shallow portion of the creek, with its mouth up-stream, and fixed in position by means of rocks and stones placed at an angle across the water. What with the "beating" of the hunters further up the creek, the fish are driven down and caught in the basket which (in the cases I saw in the neighbourhood of Atherton) protruded just above the water-surface. The basket (MAL, kau) employed on the Tully River is rather more funnel or trumpet shaped than the Atherton, etc., specimens. These natives fix it longitudinally in the stream with plenty of fine water-grass or water-couche lined all around on its inner surface. Along both sides of an angle, diverging from the mouth of the cage, they then make a fence with sticks, etc., driven in vertically, and plenty of big blady-grass intertwined, so as to prevent the fish passing through anywhere, except into the trap. When hunting for eels this cage is put down in the daytime, left all night, and only taken up in the morning. The same blacks also use these baskets as an adjunct to other methods, actually driving the eels into them. Thus, if in daytime the natives come across a hollow log lying in the water, and suspect an eel in hiding, they will hold the cage at one extremity and drive a lawyer-cane (with frayed end) into the log from the other, and so hunt the animal out. Supposing the log to be closed at one end, the cane is put in, and its chewed, i.e. frayed, end carefully examined after being poked about there, so that, if slimy, etc., the presence of the fish is easily ascertainable: should the log, furthermore, prove rotten, the blacks will make another (fresh) aperture near the closed end, and so with the cane drive him out into the mouth

of the basket held there. Leichhardt, in his Journal, etc., speaks of "a long funnel-shaped fish-trap" and "a great number of long conical fish and crab traps," made of *Flagellaria*, on the Limmen Bight and East Alligator Rivers respectively; though both these are in the Northern Territory, they are the nearest places at which I know of anything approaching the Cairns and Cardwell district fish cages.

- (1) **Fish-nets** are not employed at Cape Bedford, on the Bloomfield, or on the Endeavour River. This statement is confirmed for the last-mentioned by Lieutenant Cook, in that he says "as they have no nets, they catch fish only by striking." On the other hand, both the Cooktown and Cape Bedford blacks know what a net is, and, in their Koko-yimdir language, speak of it as *magar*—i.e., a cobweb. The nearest places to them at which nets are actually used would be the Laura (60 miles inland), Princess Charlotte Bay (on the north), and Cape Grafton (on the south). I have not been able to obtain reliable particulars as to the construction, pattern, and mode of employment of the Cape Grafton net (KUG, paiparo, mokaro). Though larger nets are imported from the south, the true Boulia district fish-net (PPT, mali) is not less than 6 feet in length, is woven on the netting-stitch pattern (see Bulletin No. 1, Sect. 23) usually from *Psoralea patens* twine, and fixed on a **non-folding rectangular frame** composed of four withes bound at the corners. Several of these nets are used at a time. Two men start into the water from the river bank, with the net between them, followed successively by another and another pair, and perhaps a fourth, each couple coming up from behind, so as to overlap the one immediately preceding and together forming a gradually more and more enclosed space, into which the beaters in front are driving the fish. The Cloncurry net (MIT, mu-na), which is usually obtained in barter from the Upper Flinders, is on an average of about the same size as the Boulia one, and woven on similar lines, but the framework is more oval, all four sticks being much curved; indeed, on the two longer sides, the advantages of a "curve" may be artificially produced by bracing two withes together at a very open angle. Nets in the form of a **non-folding oval frame**, with attached net woven on the "hour-glass" variety of pattern (see Bull. No. 1, sect. 22), appear to be peculiar to the Peninsula, where I have seen them on the Morehead, Musgrave, Normanby, Laura, Palmer, Embley, Pennefather, and Batavia Rivers. In the hinterland of Princess Charlotte Bay, where these nets reach their maximum size, the frame is formed of one thickness of lawyer-cane, but made up of from two to three pieces, firmly lashed together; usually, its width is about 2½ feet and length 5 feet, but these limits are often exceeded, Fig. 8. The twine from which this net (KRA algomarda, KWA arwi-a) is woven is obtained either from the *Acacia latifolia* or *Livistona australis*. It is borne along in the water more or less vertically, and worked by two boys, their friends in front acting as "beaters." On the Palmer, this net is made of *Acacia leptocarpa* string: its frame is also comparatively large, and used similarly by two people. On the Batavia, Pennefather, and Embley, the frame is made of the *Flagellaria indica*. The Laura, etc., blacks—the Koko-yellanji—call this variety of net yikan-ikan: the Nggerikudi natives of the Pennefather River speak of it as ngo-ajana, and certainly among these latter aboriginals it is used and manufactured only by the women. **Folding oval frame** nets, with mesh woven on the European netting-stitch pattern, replace further south the non-folding frames with "hour-glass" pattern mesh, just mentioned; they are to be met with from the East Coast (Princess Charlotte Bay certainly to Hinchinbrooke Island) right across country to the Western Districts (Cloncurry, Normanton, Bentinck Island, Boulia). These folding-nets are put to use on similar lines as the preceding, save that, instead of being raised horizontally out of the water when a fish is caught, they are folded up like a purse, the two halves of the frame working on twine, etc., hinges; the smaller kinds are usually managed by one person, who will grope about the shallower water-holes, etc., with the article held either in front or at his side. On the (lower) Tully River, in narrow channels, the folding-net—instead of being held with the hands—may be fixed against two stakes, the current helping to keep it in open position; with other natives "beating," as soon as the one in charge of the net sees a fish driven near, he dives in and shuts it, but to do this successfully he must be in close proximity, either on the bank or an overhanging snag. This kind of net so fixed may be used here with "wings" in flood time, especially for "rock cod"; the "wings" are composed of short thin stakes intertwined with blady grass. Oval-frame folding-nets vary in size from 1 to 4½ or 5 feet in their longer diameter. The Maitakudi of Cloncurry call the smaller varieties billinya. With the larger sizes—e.g., those met with among the Koko-lama-lama and true coastal blacks of Princess Charlotte Bay—the strain of folding under water is considerable, and each half of the frame is accordingly composed of two pieces of cane (*Calamus*) twisted one around the other; these particular nets (KLA, warte-a) are here woven from *Malaisia tortuosa* and *Sterculia caudata* fibre. On the Tully River the frame is usually made of *Flagellaria indica*, Linn. (MAL, painki): the net is called mokaro (MAL). The actual mesh-work of these folding-nets is constructed to the shape of a rectangular parallelogram: for transport, carrying them over the shoulders, the two sticks (i.e., the two halves of the frame) are passed through the loops of the shorter ends, Fig. 9, and rolled up: when required for use, the free extremities of both sticks have only to be inserted through the meshes of the top and bottom rows, Fig. 10. **Non-folding triangular-frame** hand-nets were met with (1897) on the Keppel Islands and mainland coast-line extending from Port Curtis to Broomsound. The frame consists of two switches, usually of a species of *Acacia*, overlapped and bound together at their thinner extremities, and tied to the cross-junction of the two thicker ends which are left projecting, Figs. 11, 12. The mesh proper, woven like the ordinary

netting-stitch, is worked onto an initial row of slip-knots (Bulletin No. 1, sect. 26), and, fixed on a correspondingly small frame, is allowed to have considerable depth. Two of such nets, one in either hand (which holds the thicker free ends of the frame), are employed simultaneously. Fishermen will thus often hunt in company stationed in position of more or less of a semi-circle in the water, while others, perhaps without nets, will act as beaters. These nets are employed both in deep and in surface fishing, though more often the latter—especially in the case of mullet. From the fact of the hunter having to quickly bring into close apposition his two nets as soon as a fish comes within reach, it often happens that one or other wrist is injured by the projecting ends of the frames. Captain Flinders, in speaking of the Sandy Cape natives, close upon a century ago, says ("Terra Australis," p. 10): "I noticed in most of them a hard tumour on the outer knuckle of the wrist which, if we understood them aright, was caused by the stretcher of the scoop coming in contact with this part in the act of throwing the net." So again, when describing the Keppel Bay aborigines (T.A., p. 30), he mentions "upon the outer bone of the wrist they had the same hard tumour as the people of Hervey's Bay, and . . . as cast nets were seen in the neighbourhood, there seems little doubt that the manner of throwing them produces the tumours."

- (j) **Stone Dams, Weirs.**—Independently of nets, another contrivance for catching fish, and one greatly adopted after floods when the waters are going down, is the building of a dam right across the stretch of water. These dams, which may be used again and again, season after season, constructed of rocks and stones, have "breaks" in them, through which the water rushes on to platforms built immediately below. These platforms, also on a foundation of and surrounded with stone, are covered with boughs and a top layer of grass, which in between its meshes catches the fish as they are carried over the breaks with the receding waters. Instead of, or sometimes in addition to, the platforms, a net may be fixed up with two sticks on the lower side of the breaks, and so catch them as in a large bag. Such stone dams are met with in the North-West Central Districts. On the East Coast—*e.g.*, Russell, Barron, Mulgrave, etc., Rivers—where the net and platform at the gap are replaced by a cage or basket, I do not know for certain whether the same dam is used again from year to year. On Sweers, Bentinck, Mornington, etc., Islands, stone dams are erected along the coast-line in the shape of more or less of a half-circle, the extreme of the convexity reaching sometimes to as much as 300 yards from the shore. The majority of these dams are contiguous, and built of pieces of stone (subsequently locked together by oyster-growths) to a height of from 18 inches to upwards of 3 feet, the general contour of the rocky beach being everywhere taken advantage of; they are covered at high water. The fish are thus blocked from going out to sea with each receding tide.
- (k) **Bush Fences** are similarly employed only in flood time for catching the bigger fish as they are returning to the lower reaches, and are of pretty universal use. One of the biggest, Fig. 13, that I have seen was in 1898 on a dried-up stream, which was believed to be somewhere about the head of Birthday Creek (Pr. Charl. Bay). It was quite 100 feet in length, formed of a composite cross-piece, along which dozens upon dozens of thin switches from 8 to 10 feet high were resting. The five or six long logs constituting the cross-piece were supported (see diagram, Fig. 14) by a corresponding number of upright forked timbers, and reached a horizontal level corresponding with the height of the flooded water-surface. The switches, which were firmly stuck at their bases into the mud, rested at a marked angle upon the up-stream side of the cross-piece, thus all the better resisting the force of the waters when coming down. Near the extreme edges of the fence, two spaces had been left, about a foot wide, over the down-stream side of which nets had been fixed for the purpose of catching the fish as they attempted to get through: as the waters still further receded, the remaining fish would be speared or otherwise captured along the bases of the switches in the central portion of the fence. The whole structure was named respectively *areria*, *rerian*, and *aro-unba* by the Koko-wara, Koko-rarmul, and Koko-lama-lama boys who accompanied me. Another curiosity in the way of bush-fences I saw in the neighbourhood of Mapoon in a tidal creek, the fish coming in with the water rising, and detained there when the water falls. The bushes constituting it must have been about 3 feet high, in the shape of a blind alley-way with a cross-partition, the latter being of a considerably lower level than the remainder: the trap of course ran along the length of the stream.
- (l) **Artificial moveable fences**, formed of grass bushes, etc., are worked as follows:—In a pretty shallow waterhole, the whole diameter is blocked by all the women from the camp taking up their positions close together side by side, progressing forwards on their hands and knees, and pushing thick bundles of grass tussets and leafy boughs in front of them: a "grass" fence is thus formed, which shifting onwards and onwards drives the fish before it close on to the banks, where they are easily killed and caught. This method is practised throughout the North-West Central Districts, in the Peninsula, and on the East Coast certainly as low down as the Tully River.
- (m) **Harpoons**, though mainly employed for capturing turtle (sect. 18) and dugong, are also used for catching the larger varieties of fish. With the implement as used at the Keppels and surrounding coastal district, the rope is firmly hitched onto the dart, wound twice or thrice round the length of the shaft, onto the extreme butt of which it is then tied, finally passing to the thrower's hand containing its remaining length looped up in a number of coils. When the animal is struck, the impact of the blow frees the dart from the shaft, both fish and shaft being hauled in by the rope, the extreme end of which has been firmly grasped by the hand. The coastal blacks at the mouth of the Tully River also use the harpoon for the larger species of fish, *e.g.*, shark, trevally, etc., both in

daylight and by moonlight. Under the latter circumstances they can tell by the ripple, etc., where such an animal is. The connecting rope is here much longer, running often to over 30 fathoms, and its main portion is carefully coiled in the dilly-bag hanging in front from around the hunter's neck. The hunter will, of course, hold a few loops of rope (sufficient to allow of the dart reaching the required target) in his throwing hand and thumb, but directly he has let fly he bends forward, so as to give scope for the line to get clear, and then after a time begins to haul in.

- (n) **Spears.**—There are one or two peculiarities in the method of employment of these weapons for striking fish which ought to be noticed here. For instance, it is of common occurrence, especially in deep or muddy waterholes where the fish cannot actually be seen, for the blacks to strike here and there promiscuously on the off chance, and every now and again they may prove successful. So, again, when after eels, on the (lower) Tully River, in any streams after the floods have gone down, or in any eddy where dead leaves, water-grass, etc., have collected, some fifteen to twenty men will wade in, up to the waist if necessary, and job the points of their spears vertically down (single-pointed spears are used for this: the three or four-pronged ones would get clogged and caught in the tussocks). The twisting and twirling of the spear will be the immediate indication that an eel has been "pinked." The next process, in the old days—i.e., before the introduction of wire—was for the native to bend down and capture the fish with his hand before it could slip or wriggle off, a practice which often entailed his being severely bitten. Now, however, that the black is provided with a wire spear, he can push it still further down, then pass his hand down right underneath the animal, and bend the wire upwards. Thus impaled, the eel cannot get away. In the case of big fish e.g., barramundi, black bream, etc., lying in and among the snags on this same river—the Tully—the blacks will creep very stealthily, or even dive, into the water, and, with a spear, strike the creature from the sides or from underneath.

16. Snakes are often hunted for in iguana burrows. On the lower Tully River the large carpet-snake (*Morelia variegata*) is commonly discovered by its messmate, "Broadbent's black butcher-bird" (*Oracties Quoyi*) these two being nearly always found together here. The bird flies over the snake with a "clucky" chirp, and whenever the natives hear it in the dense scrubs they sneak in to discover the reptile, which is caught by being grabbed at the back of the head.

17. Frogs.—In the North-West Central Districts frogs are usually dug up from their burrows, the surface indications of which are recognisable. The digging is effected with the hands in sandy soil, with the digging-stick in hard ground. On the lower Tully River, during times of flood, and in very low-lying country, there is a certain kind of green frog met with in great numbers. The natives, both male and female, armed with a stick in the left hand, and provided with a large dilly-bag slung over their shoulders, wade into the water. As each frog is caught with the right hand its head is struck sharply against the stick held in the left, and then slung over the shoulder into the basket. Dozens and dozens of these creatures are caught in this way.

18. Turtles and Tortoises.—Turtles are in the main hunted with the harpoon. This weapon consists of a shaft and dart, connected by a rope, the dart being jambed into a socket at the distal extremity of the shaft. As Lieutenant Cook puts it very tersely, when speaking of the Endeavour River natives: "To strike the turtle, the peg [dart] is fixed into the socket, and, when it has entered his [the turtle's] body and is retained there by the barb, the staff [shaft] flies off, and serves for a float to trace their victim in the water; it assists also to tire him till they can overtake him with their canoes and haul him ashore." This description still holds good for the Keppel Islands and corresponding coastline, extending up to Broadsound, where the darts are still barbed. Further north—certainly at the Endeavour River—the dart, now generally replaced by iron, is not bearded, and consequently no direct attempt is made to haul onto the rope; for, were too sudden a jerk to be exerted on it, the dart would very probably slip out and allow the turtle to escape. In these cases, the aim of the hunter is to dive into the water after the creature immediately upon striking: he is guided as to what direction to take by the connecting rope attached to the shaft bobbing up here and there on the water. His next move is either to put the rope in the form of a slip-knot round one of the flappers, and so get the animal dragged up into the canoe, or else to turn the creature bodily on its back, and thus bring it himself up to the surface. The advantage of the iron dart is that it will penetrate the scutum: the wooden one, for which far greater skill is required, has to be thrown into the unprotected portions of the animal—i.e., the neck or posterior. At Cape Grafton, I have known of blacks going out in a canoe, from which one will dive into the water and so drive the animal up to the surface, where it will be harpooned by the others. On the Keppel Islands, the natives will dive and catch turtle under water with their hands, rendering the creature helpless by turning it on its back. Hunting turtle with the assistance of the sucker-fish (*Remora*) has already been drawn attention to [Sect. 15 (e)].

Tortoises are caught in the hands or with small nets. On the Palmer River, the Koko-minni blacks kill the tortoise by pulling its head well forwards and then breaking its neck upwards and backwards.

19. Crocodiles are usually speared, a favourite spot appearing to be just behind the arm. As a rule the larger-sized ones can only be caught when stranded in the smaller water-holes after flood by letting fly dozens of spears into them. On the Upper Leichhardt and on the lower Palmer River two or three cases came to my notice where the animal (*Philas Johnstonii*) had been caught by hand in the water, the aboriginal hunter getting onto its back, holding its jaws together, fixing its tail by putting his leg round it, and so dragging the creature onto the river bank where it is easily rendered comparatively helpless. At Cape Bedford are to be found one or two old men who are not afraid to dive into a water-hole and tackle the true crocodile (*Crocodilus porosus*). So also on the lower Tully River, where the same animal is captured by means of a slip-noose or a screen, according as the water is a tidal or a non-tidal stream. The **slip-noose** is employed only in shallow water unless there is some overhanging snag from which the natives can conveniently operate. The blacks rather try to drive the reptile into some deep pool, when one of them will dive down onto it and slip over its head a lawyer-cane slip-noose, which it is the business of his assistants to tighten and haul in [E. R. Brooke]. When

driven like this, the crocodile will crouch up against the side of the bank, when the hunter will jump in and dive into such position as will enable him to put the noose over the creature's head from its free quarter. As soon as it is once over, he signals to his mates, who are holding on to the other end of the lawyer, by a quick vibration on it; they, some nine or ten of them, then hang on, pull steady, haul the brute onto the bank, and despatch it by knocking it on the head with heavy sticks. The reptile may make a snap or two at the cane, but apparently does not damage it. The mechanism of the noose is represented in Fig. 15; its knot is previously hammered and battered so as to prevent its coming untied at the critical moment: the first 10 or 12 feet of the noosed end are also previously twisted round and round in a spiral, so as to give springiness and prevent kinking when put into use. Sometimes, with a view to increasing the purchase, two lawyer-canes are tied together, making up a total length of well over 50 feet. The whole implement is known locally as the kambai. It is noteworthy that, in the early days of white settlement here, the natives used to suspend similar nooses from overhanging boughs along the scrub tracks, hunt the cattle along, and so capture them. To catch crocodiles in tidal waters, a **screen** is used in connection with a fence thrown across the stream. This fence is made of some fair-sized stakes, 10 to 12 feet long, driven down into the mud on their pointed ends, about a foot apart, but leaving open a space some 6 feet wide in the centre of the creek. The tops of the stakes, flush with the high-water level, are held in position with small lawyer-canes. Such a fence may lie idle for some time, but as soon as the natives find that a crocodile has gone up stream through the vacant space, they close it by means of the screen—the niakai. This screen is formed of split pieces of cane placed horizontally, and all woven together with a very close mesh. It can be rolled up, for purposes of transport, just like a Chinese blind. It is tied up to the top of the upright stake on either side of the hitherto open space: it is fixed below by a forked stick driven into the mud. When once the progress of the animal is thus checked, the fall of the tide is waited for, when spears and sticks finally help to put an end to the reptile's existence.

20. "Iguanas" (*Varanus Gouldii*, etc.) are speared out in the open, or else hunted for in hollow logs, or in their burrows. At Princess Charlotte Bay the natives are well conversant with the habits of this creature, and can always tell by the tracks whether it is in its ground-burrow or not. It would appear (from the statements of these blacks) that the iguana goes into one of its burrow-holes at sundown, and closes it up after it. It emerges during the morning by another opening, into which it returns the same evening, closes it up again, and escapes by yet another aperture on the following morning—in fact, every morning it emerges from another of the many openings leading to the burrow. Only during the very hottest part of the day will an iguana perhaps find its way back into the burrow, but only to emerge again when the atmosphere is cooler. If a log, etc., is suspected of containing an animal, the natives will insert a lawyer-cane "prodger," not only to prove their surmises, but also to measure the length of the hollow, so as to indicate where it can be suitably cut into from the outside.

21. Emus (*Dromæus Novæ Hollandæ*)—

(a) The following method of hunting emus, by driving them into **nets**, is practised throughout North-West Central Queensland:—Emus generally make for the water-hole, day by day, along the same track, coming either at early morn or midday. The hunters, having noted this track, will wait in ambush and allow the bird to pass down on its way to water, but, while drinking there, will sneak round, and silently as well as expeditiously rig up the emu-net some 30 or 40 yards behind the creature and right across its path. Since the emu usually spends some time at the water-hole, the fixing up of the net is not necessarily quite so hurried a performance as might have been expected, though it can be placed in position within a very few minutes. All being ready, the hunters will suddenly emerge from their hiding-places when the bird returns, and as it rushes headlong (any diversion from the path being prevented by the men stationed in suitable positions) will drive it into the net, where it becomes entangled, and with boomerangs and nulla-nullas soon despatched. The general appearance of two of these nets, as made in the Boulia district, is shown in the diagram, Fig. 16. The names given to the constituent parts are those applied by the Pitta-Pitta natives. These two nets were fixed up in position for my special inspection, close to the Boulia camp, in well under five minutes. A B C D are the strong terminal supports, markányi, between $4\frac{1}{2}$ and 5 feet long, fixed firmly into the ground. E E E are the slender intermediate supports, tinja, about 8 or 9 feet long, forked at their upper extremities, which support the top string of the net on the stretch, and are lightly planted into the ground at an angle. X X X is the net itself, the yelpi, made of flax rope, about $\frac{1}{4}$ inch in diameter, and with meshes about 12 inches by 9 inches, the toprow hanging like curtain-rings from a top-string F, the yuwanna, attached to the terminal posts. Each knot is called a mati. By means of the intermediate supports on the top-string, the net in the lowest places touches the ground from a height of quite 7 feet. The distance between A and D, the space enclosed by these two nets, was over 120 feet.

(b) Sometimes a long **alley-way** (PPT, yel-ka yel-ka), much wider at one extremity than at the other, is built up in a convenient situation with bushes, boughs, and saplings intertwined: the narrower end is blocked with an emu-net, while the other is left open. Close to the opening, and about midway between the two sides, are the hunters, who, concealed under cover of some bushes, etc., start imitating the emu's "call." The bird, coming up in answer to the sound, struts along either side of where the men are in ambush; the latter, on rushing out, making a sort of wheeling movement, and, once getting behind the creature, have no difficulty in driving it before them along the alley into the net where it becomes entrapped. The "call," a sort of "drumming" sound, is imitated by blowing into a hollow log some $2\frac{1}{2}$ feet to 3 feet long, from which the inside core has been burnt so as to form an aperture about 3 inches in diameter; when in use, the tube is held close to the ground in which a slight excavation has been made. These "call-tubes" are met with throughout North-West-Central Queensland; the alley-ways I only know of being employed in the Boulia District.

- (c) **Pits.**—On the sandhills round above the Hamilton River, in the Boulia District, a deep pit is dug in the middle of the day in close proximity to some wild-vine bush, emu-apple tree, etc., and, to avert suspicion, the excavated sand removed to a considerable distance. The mouth of the pit is carefully covered in with light boughs and saplings, hidden up with sand, and not visited again until the following morning, by which time a bird, coming after the fruit, will probably have fallen in. The same method of single pits is employed by the Kalkadun natives of the upper Leichhardt River and Selwyn Ranges. On the upper Georgina River, pits were used in the "old" days, but the practice is now fast dying out. At Glenormiston, on the lower Georgina, a system of multiple pits is put into practice. Arrived at the hunting-ground frequented by the emus, and during their pairing season, the men make a more or less circular fence or enclosure with trees, bushes, and saplings, about 60 feet in diameter. Along this fence some half-dozen gaps are left, and at each of them a pit is sunk, about 2 or 3 feet wide and 4 feet deep, the mouth being cunningly concealed with boughs and grass. In the centre of the circle a bigger hole is dug, similarly masked by bushes, into which three or four men can crouch. With the "call-tubes" these men imitate the emu's note, and the birds, making for the direction in which they hear the sound, come up to the fence and run along it to the next gap, where they fall unsuspectingly into the pit. Sometimes there are external wings, also with gaps, etc., stretching from the circular fence. The same enclosure may be used for three or four years in succession (J. Coghlan).
- (d) In the Boulia District, on occasion, when a mob of emus happens to come within the neighbourhood of a camp, all the men and women may assist in surrounding and **mustering** them like cattle, subsequently driving them down to the nearest water-hole, where they are killed with nulla, boomerang, or spear.
- (e) All over North Queensland emus may be **speared**, only the method of stalking varying. Thus in the Cloncurry district, to prevent the bird seeing him, the hunter covers himself with bushes, and holds others in front of him: to prevent the bird "smelling" him, he gets rid of the perspiration from under the armpits and from between the thighs by rubbing these parts with earth. So again, in the hinterland of Princess Charlotte Bay, the hunter wears a collar-like head-dress—made of a thick sheaf of long grass doubled and tied behind—and holds some bushes in front of him. On the Pennefather, the natives similarly screen themselves with some bushes afrent, but I do not know of any special head-gear being worn. The Palmer River blacks either hide in amongst the *Owenia* trees, or conceal themselves in pits dug in their close proximity, and spear the bird either as it comes to feed on its favourite fruit or passes by. Leichhardt, in his Journal, etc., p. 364, when on the Albert River, says: "The natives had surrounded the water-hole on which we encamped with a barricade or hedge of dry sticks, leaving only one opening to allow the emus to approach the water. Near this the natives probably kept themselves concealed and waited for the emus." The same observer, when referring to a water-hole in the neighbourhood of the Nicholson River (p. 376 *op. cit.*), again expresses himself: "The natives had surrounded it with dry sticks, leaving an opening on one side for the purpose of taking emus, as before described."
- (f) Emus may also be hunted with **dogs**, the latter always making for the bird's neck.

22. Cassowaries (*Casuarinus australis*).—On the lower Tully this is the only bird which is speared, the natives imitating its "call," and hiding behind a tree, etc., as it passes along to water. Sometimes it is hunted with dogs. Its young are generally run down.

23. Pelicans (*Pelecanus conspicillatus*).—At that portion of a creek or water-hole (in the Boulia District) which the pelican is known to frequent, the hunter will sit in the water, in ambush, under cover of the bushes or suitable overhanging tree, etc., and throw empty mussel (*Unio*) shells one after another to some considerable distance in the water. The bird, thinking that these are fish "jumping" on the surface, comes closer to inspect: at the same time the concealed and otherwise immovable individual taps the water with his fingers to mimic fish splashing. The pelican, more and more convinced of the plentiful supply of fish in and around these very same bushes, etc., swims more and more into danger, and, when arrived close enough, is either hit with a boomerang or sometimes even caught with the hands. On the upper Georgina River, pelicans are caught at night when asleep on the banks; the hunters—their bodies greased with ashes, and heads covered with bushes, the better to conceal themselves in the darkness—will noiselessly swim up to the unsuspecting birds and easily despatch them. The East Coast natives may similarly creep onto pelicans at night and spear them.

24. Turkey-Bustards (*Eupodotis australis*).—This so-called turkey may be speared—the commonest method, as a general rule, everywhere. In the Boulia District it is either caught with a grasshopper and noose fixed to the extremity of a long thin switch held by the hunter, who gradually creeps forward unobserved, enveloped in boughs and bushes, or else quietly surrounded in the open. In the latter case numerous fires are simultaneously raised in more or less of the line of a circle right round the group of unsuspecting birds which, dazed with the smoke and din now suddenly evoked, are rushed upon and easily knocked over with boomerangs and nullas.

25. Scrub-Turkeys (*Telegalla Lathamii*): **Scrub-Hens** (*Megapodius tumulus*), etc.—The *Telegalla*'s tracks, either to or from water, usually pass along the same path daily, and consequently but little difficulty is experienced in determining the exact spot where to erect one of the lawyer-cane traps into which this bird is decoyed and captured. The particular trap used on the Russell River consists of a series of lawyer-cane hoops stuck into the ground, and fixed in continuity by means of strips of similar material fixed along the top and sides respectively. According to H. Saltmarsh, who kindly supplied the photo. from which Fig. 17 is taken, the trap is about 4 feet long, and 1½ feet high in its highest part—i.e., about 9 inches from the entrance—and the mouth is about 15 inches wide. Though the natives make them of different sizes, the above is an average one; the local name is "gimmom." After erecting such a structure, the hunter will bait it well with nuts, fruits, etc., in the morning, and then about sundown

take up his position in a specially constructed hiding-place—made of leafy branches, etc.—about 12 feet away, but right in front of the opening. Hence he rushes out, immediately the turkey strolls into the trap. A native will generally build two traps in close proximity, so as to work both from the one hiding-place. In the Tully River district, the traps—which are employed here for both *Telegalla* and *Megapodius*—are furnished with “wings.” These latter consist either of sticks and brushes, closely intertwined, or else of half-hoops of lawyer-cane, placed as in Fig. 18, in the form of a close network. The whole trap complete takes about half-a-day to fix in place. The hunter occupies a position behind the wings, in close proximity to the trap, and, crouching down, covers himself with leaves and bushes: the Tully native “calls” for the *Telegalla*, but not for the *Megapodius*.

In the case of the **Swamp-Pheasant** (*Centropus phasianus*), on the lower Tully, the nest is discovered and located in the day time; at night, a folding-purse net is closed over the whole clump of grass containing it and the bird.

26. Ducks, Cranes, Diver-birds, and others may be caught with sticks, etc., in the nesting season by sneaking upon them unawares. The natives of the upper Georgina and in the Boulia District noose ducks with a long slender stick, to the extremity of which a feather-quill with slip-noose (PPT, nanteri) is attached. The hunter, well concealed with bushes tied round his head and face, waits patiently in the water for his prey, which, paddling along the water, soon comes into suitable position for the loop to be slipped over its neck. When speaking of the blacks in the neighbourhood of Bowen, Murrell says (Narrative, etc., 2nd. Ed. p. 44): “They also catch many birds [not specified] with snares—merely loose knots—which are placed in the thick grass and reeds in the swamps, and as the birds pass through in quest of food, especially at night time, the prey is caught.” In the hinterland of Princess Charlotte Bay, on the Palmer River, etc., ducks, geese, and similar game are all stalked and speared—usually with the ordinary simple-point spear if on land, but commonly with a pronged one if on water. In either case, the aboriginal covers his head with a bundle of long grass, tied about near to its extremities into something like a horse-collar, the ends falling over onto the back of the wearer’s shoulders. Fig. 19 shows the hunter thus arrayed in his head-gear, holding with one hand a bunch of leafy switches in front, and with the other his wommera spear, as he glides forward in the water after the unsuspecting birds. Viewed from the front, the individual so concealed looks for all the world like a tussock of grass floating down the stream, so slow and silent are all his movements. If duck are being hunted out on the plains, the black does not trouble about holding the leafy screen in front of him, but stalks his prey more or less on all fours, under cover of any intervening bushes. On the Pennefather, Embley, Tully, etc., Rivers, ducks and geese may be knocked over with long thin switches (*Pluggea*, etc.) both by day and by moonlight. The Pennefather natives, in addition, will build special bush-shelters in the lagoons, and hiding under cover will wait there for hours for a favourable strike with their spears. In the neighbourhood of the Laura, also at Cape Bedford and elsewhere, ducks can be caught by silently diving under them in the water and pulling them down.

27. “Flock”-Pigeons (*Histiophaps histrionica*) along the Burke, Georgina, and other Western rivers, where they can be met with in thousands, are caught in small-mesh nets (PPF, mokwari) of a particular shape. The upper edge of this net is attached along its whole length to a long thin curved stick, the handle of which is free, and held by the hunter when all is in readiness; its lower edge, about 10 feet or 12 feet in length, is about 3 feet longer than the upper, and, when in use, fixed along its entire extent into the ground by means of little forked twigs. A small artificial water-hole, about 6 feet long and 2 feet or 3 feet wide, is made parallel with, and at a little distance from, the main channel where the birds have been noticed to usually alight; this miniature lake is effected by a scooping up with the hands, and, what with the sandy formation of the soil, it quickly fills with beautiful clear water. When in the late afternoon the birds come down to drink, they will in all probability make for it, thinking it to be a new hole and its water fresher. The hunter knows this, and lays his net quite flat upon the ground, with the lower edge fixed close to that side of the artificial water-hole further removed from the creek; he hides himself in a crouching position under some bushes and sand close enough to have full control of the long handle. The pigeons settle down in time, walk on and over the net, and collect on the miniature lake, where they “sit” the water like ducks. As soon as the individual in ambush thinks the opportunity suitable, he revolves the net around its fixed axis by a very swift movement of the arm and wrist, thus enclosing the unsuspecting birds beneath. A similar but smaller mokwari net is used by the Maitakoodi in the Cloncurry District, not only for flock pigeons, but also for galah parrots and other birds; the handle, however is more curved, and the lower edge of the net itself only just a little longer than the upper. The artificial water-hole is not necessarily made near a river, but usually anywhere in the open. A small excavation is made, 18 inches to 2 feet in diameter, which the woman comes forward and fills. As she retires, the birds apparently think the coast is clear and come down to drink, when they are easily caught by the hunter, who is lying concealed all the time half hidden underground and covered with bushes. This method is adopted especially in the summer months when all the natural water-channels have dried up. On the head-quarters of the Georgina, the Workai and Yaroinga tribes bring down flock-pigeons by throwing a hook-boomerang into the middle of a mob of them.

28. Torres Strait Pigeons (*Myristicivora spilorrhoea*).—These birds are caught on the lower Tully by two different yet effective means, according as they are hunted for on the coast-line or on the mainland. As the pigeons fly homewards of an evening to the islands, they usually follow the same course of flight, night after night; and when leaving the thick belt of timber fringing the shore, they swoop down to the fore-shore, and fly low on the water. These facts are well known to the natives. Accordingly, as the flock of birds commences to swoop, the blacks (concealed beneath and on the shore-side of the timbered belt) let fly any ordinary stick into its midst, bringing down as many as four birds on occasion with the one throw. There is often a signaller picketed some distance behind to give warning of the birds’ approach to the individuals concealed in front. On the mainland these Torres Strait pigeons similarly keep to the one track. To capture them now, any high bushy tree is chosen along this

same track anywhere convenient, and the native climbs up it as high as he can get. In his hands he holds a long thin switch, to which a special name is applied, quite 15 feet long; to prevent this accidentally dropping, it is attached to the wrist by lawyer-cane fixed to the butt-end. Should the tree be bare, comparatively speaking, of foliage, he will build a sort of bush-shelter to hide in, and, to prevent accidents in the way of slipping off or falling down, will often tie himself to the tree by a cane passed round his waist. He goes up the tree in the afternoon, about a couple of hours before sundown, and, so prepared, awaits the evening flight, when, holding the stick with both hands, he strikes at the passing birds, and is generally very successful in knocking some down. Torres Strait pigeons also have another peculiarity in that they always roost on low branches—the knowledge of which was utilised in the old days on Hinchinbrooke Island. Here the islanders would during the daytime—i.e., during the birds' absence on the mainland—prepare numerous fires directly under those particular trees where they knew these pigeons to roost, and at night-time, after their return, set fire to them, the birds soon being killed and suffocated in the smoke.

29. Corellas (*Licmetis nasica*), **Galahs** (*Cacatua roseicassila*), and **White Cockatoos** (*Cacatua galerita*) are entrapped on the water in the late afternoon in the upper Georgina River District. The hunter, after tying numerous grass twigs and leafy boughs round his head, neck, and face, which are thus completely concealed, will swim out to some log or snag projecting just out of the water, on which he has learnt, from previous observation, these birds have been accustomed to alight: here he supports himself, with only his head above the surface. As the birds come down to drink, they fly around the bushes, and resting on the log, etc., are easily caught by the legs, pulled under the water, their necks wrung, and stuck one after another in the hunter's waist-belt. Another and very common method throughout the North-West Central Districts of catching these and other birds which fly in mobs is to throw a light boomerang into their very midst when on the wing. On the lower Tully River the capture of the white cockatoo is somewhat of a difficult undertaking, but is mastered as follows:—Having noticed the particular branch and tree on which these birds are wont to camp, the native will, during the daytime, climb the tree and fix a lawyer-cane to the branch in question: the cane is of such length that it reaches to the ground. At night-time he will climb it hand-over-hand fashion, fixing his feet as he progresses by grasping with the big and second toes; at the same time he carries with him a long, thin stick hanging down behind and attached to a ring of lawyer-cane round his forehead or neck. Having reached the branch singled out, he very stealthily crawls along it, and, sneaking up very carefully, knocks the birds over with the stick. This method of capture is somewhat of a hazardous one for the hunter, but is commonly and successfully employed. As will be seen in the next section, parrots and cockatoos can also be caught with "bird-lime."

30. Other small birds.—The green "shell-back," "love-bird" or "budgeregar" (*Psittacus*, sp.), and other similarly small birds are caught with net and alley-way on the upper Georgina River, and in the Boulia District. Stretching from some water-hole, in the neighbouring trees of which these birds have been observed to roost, two long divergent fences are built: these are made with thick bushes, saplings, etc., to a height of some 8 to 10 feet, and 40 or 50 yards long. The space within the narrower portion of the alley is cleared of trees, etc., that in the wider portion being left untouched. In the very early morning a number of men sneak up towards the trees, bushes, etc., therein remaining, and with many a shout and every kind of noise will suddenly commence throwing sticks and boomerangs into them. The birds being thus driven from their roosts by what they believe to be hawks, fly low and in a direction opposite to whence the noise proceeds, but, not being able to penetrate the bushes forming the fence, make straight for the water-hole, where they are intercepted in scores by a fine meshed net held up by two men standing just in front of the opening. On the Eastern Coast, as a general rule, with the smaller birds, it is the eggs and fledgelings which are rather sought for. On the Tully River, when after "Broadbent's metallic starling" or "weaver-bird" (*Calornis metallica*), as it is known to the local settlers, the natives climb the trees where the nests are, and carry up a hooked stick hanging from over the forehead down the back. When they reach a sufficient height they free one hand, take the stick in it, and by its means pull the nests and fledgelings down. The lower Tully natives use a substance akin to "bird-lime"—chimbun—for catching smaller birds, peewits, small parrots, and even young cockatoos. In the case of the two last-mentioned this chimbun is spread not only along the branches where they roost, but also in and among the young blossoms. The tree, a fig, from the sap of which this bird-lime is obtained, I have not yet been able to get identified.

31. Kangaroos (*Macropus*, etc.), in the North-West Central Districts, are hunted in various ways. They may be tracked and sneaked upon during the extreme midday heat, and caught while resting in the shade by means of spear or boomerang. In rainy weather, and over boggy soil, they are run down with dogs. In other cases they may be caught in nets which are quickly rigged up along their beaten tracks to water with exactly the same contrivance and method as that employed in catching emus. Occasionally they may be driven into an enclosure formed of three nets fixed in the position somewhat of the three sides of a square: the hunters, having previously determined upon the locality where the kangaroos are encamped, will drive them into this enclosure with the assistance of numerous "beaters" stationed in such manner as to compel the animals to run in the direction required. It should be noted that kangaroo-nets have been used by the Central and East Coast blacks: Leichhardt, for instance, speaks of them on the Dawson (where they were made of *Sterculia* fibre) and on the Suttor: Murrell, in his Narrative, mentions them in the Bowen District: while I myself found them in use two years ago at Atherton. This Atherton net, Fig. 20, is manufactured from what the Ngatchan blacks call the kewan, *Sterculia quadrifida*: the tree is known to the Ngaikungo-i and Chirpalji as the pukuro, and it is this latter term which all three tribes employ in expressing the net as a whole. The net is woven on a mesh similar to that of a fishing-net (though its actual progress of manufacture I had no opportunity of witnessing), the particular specimen in my possession having occupied the whole local camp some three weeks in completing. The fibre-twine employed is well over $\frac{1}{4}$ -inch in diameter, and of the ordinary double-ply: each mesh can be stretched to over a foot in length. The body of the net runs on a top- and bottom- string, spoken of as the tcharli (B), attached by slip-knots to two strong side-supports (A) between $3\frac{1}{2}$ feet and 4 feet long, firmly implanted in the ground at a distance

of some 16 feet or 18 feet apart. These side-pieces are called *kartchin* by the Ngaikungo, *kanda* by the Chirpal- and Ngatchan- speaking blacks. Three or four intermediate supports, *pilchura* (C), on front and back, keep the net itself upright; they are made of comparatively light switches, and vary in length so as to stretch the net to a greater extent at the centre than at the sides. The top-string rests on the fork of the most central of these supports, it being but looped round the free extremities of the others, which are not forked. None of these intermediate supports are fixed into the ground, the weight of the net being sufficient to keep them in position. Nets such as these are fixed across the tracks leading from the mountains, etc., to the water-holes; the kangaroo, driven headlong by the shouts of the hunters, lying more or less in ambush, finds itself suddenly entangled in the meshes, tumbles over in its attempts at extrication, and is soon despatched with spears and sticks. When not in use, the net is rolled round the two side-supports and carried by a stout cord, looped at either extremity (Fig. 21); this cord is held either in the hand or, far more commonly, slung over the shoulder. On the Palmer, Musgrave, and back of Princess Charlotte Bay generally, in addition to occasionally hunting them with dogs, kangaroos are **speared**, being tracked from the windward, these animals having a very sensitive appreciation of the aboriginal's scent. Sometimes, in order to make the marsupial approach into closer quarters, or else to get it out of some brush-wood, etc., so as to make surer of his aim and yet not to run the risk of exposing his presence, the hunter will throw a spare spear well over its head into the ground beyond. This spear, having been well smeared with the perspiration from under the arm-pits or crutch, is thus fully charged with the concentrated essence of humanity: the wind carries the scent and drives the kangaroo from apparent into real danger. (Wallabies are similarly hunted in these same districts.) Along the Pennefather River country, kangaroos are killed by spear, though the methods of getting within striking range vary. If by himself the hunter will paint himself completely over with yellow ochre (with this pigment or earth rubbed well into his arm-pits, etc., so as to kill the smell of his perspiration), and make himself resemble an ant-bed under the guise of which he can gradually approach to within a very short distance. If a hunting-party can be formed, the individuals composing it will spread out and gradually circle round the locality in which the kangaroos have been observed to be sheltering, and so gradually diminish the contained area; at another time a general drive may be organised, the younger men hunting the animals into the direction of the older ones who are in waiting with their spears. So again, in the circling method just mentioned, instead of closing in on the marsupials in the centre, a three-quarter circle of **fires** may be lighted, the best spear-throwers watching for the animals to emerge from between its two extremities. This method of firing the grass but not necessarily here in a circle, is also practised at Cape Bedford, where the whole camp will go and start a long line of bush-fires—up to a mile long—extending to the summit of some hill if possible: the men will then form in line at intervals, and so circle round, spearing the kangaroos in between them and the row of fires. The dread of fire experienced by these animals was noted by Lieutenant Cook when he expressed himself as follows:—"I have observed that when they [the natives] went from our tents upon the banks of the Endeavour River, we could trace them by the fires which they kindled in their way; and we imagined that these fires were intended in some way for the taking of the kangaroo which we observed to be so much afraid of fire that our dogs could scarcely force it over places which had been newly burnt, though the fire was extinguished." The systematic burnings of the grass mentioned by Leichhardt (Journal, etc., p. 354) as met with in the Burdekin and the Gulf country may reasonably be supposed to have been connected with this method of driving kangaroo by means of fires.

32. Wallabies (*Halmaturus*, etc.) used to be caught with nets on the Herbert River (according to Lumboltz, the nets were from 15 to 20 feet long, with large mesh), on the lower Tully River, etc. At Atherton, the wallaby trap or **cage** (Bulletin No. 1, sect. 29)—the yingkar of the three tribes occupying this district—is a cylindrical basket from 4 to 4½ feet long, and up to about 1 foot in diameter, with a pointed extremity and enlarged half-funnel shaped mouth (Figs. 22, 23). Several such traps, from ten to twelve of them, are put into use on the one expedition by laying them lengthways along the wallaby tracks which have been previously and carefully noted. Each is so placed as to have its funnel or hood up, the open extremity being surrounded with bushes and pieces of bark. The trap proves itself efficacious, owing to the circumstance, pointed out to me by the natives, that when a wallaby is hard pressed and makes for shelter it runs with the head down: instead of attempting to jump over, and its attempts are frustrated by the artificial bush work, the animal accordingly forces itself into the trap, the slope of the hood still further guiding its direction, where, tightly jammed, it is soon despatched by a hunter watching in close proximity. All the women and children will "beat" a considerable area of scrub country, and, what with shouting and hooting, easily drive the wallabies into and along their accustomed tracks, and so into the cages which are there fixed in position. Pits are employed for catching wallabies in the Cape Grafton, Cairns, and Atherton Districts, but not too commonly now in the latter. These pits, intended primarily for breaking the animal's leg, are covered with cross-sticks, upon which sheaves of grass, soil, etc., are laid so as to make the supposititious level appear flush with and of the same nature as the surrounding surface. The cross-sticks may be tied and fixed in position with twine, as well as supported by uprights from below; the pits I have observed from 6 to 8 feet wide, but not more than 2½ feet deep. They are named *bangga* by the Kungganji blacks of Cape Grafton. On the lower Tully neither cages, pits, nor nets are at present employed, though the last-mentioned were brought into requisition here within very recent times. In flood-time, however, the natives drive the wallabies from off the higher levels into the water, and there soon dispose of them with sticks and spears. They also hunt them occasionally with dogs.

33. Bandicoots (*Bettongia*) may be sought for and dug out of their burrows and from dead logs. In the Princess Charlotte Bay District the lawyer-cane prodger is often found useful in determining the actual presence of the animal, and so save fruitless digging away of earth or cutting away of timber. "*Bilbis*" (*Peragale lagotis*, Reid), in the Georgina District, are similarly dug out of their holes in the ground.

34. Flying Foxes (*Pteropus funereus*), on the lower Tully River, are knocked over when on the wing, with a long stick held by the hunter hidden up in a tree on the same lines adopted in the case of the Torres Strait pigeon.

35. Opossums (*Trichoglossus vulpecula*, etc.) can be hunted at night by sight, provided of course the moon is up, or by dogs: during the day-time, the freshly-made claw-marks are looked for on the tree-buds in the hollow trunk or branch of which the animal is camping. In the Rockhampton district it would appear that in the absence of claw-marks, the presence of mosquitoes flying in and out of a hole is a very likely indication of an opossum or native bear in an otherwise unsuspected tree. The ring-tailed spotted opossum—black with white spots—is tracked not only by its claw-marks, but also by its scent, which is as strong-smelling as a pole-cat's.

36. Dingoes (*Canis dingo*) are, on the whole, hunted rather for the sake of obtaining the pups than for the sake of food—unless the natives are very hard pressed; the tracks of the pups are followed, and when run down are taken alive, to be subsequently tamed.

37. Dugong (*Halimore dugong*) are either harpooned or speared, more generally the former. As pointed out to me by the natives on the Cardwell coast-line, very good indications of their presence in the neighbourhood are the short lengths of grass, which have been bitten off by the dugong grazing below, floating on the water-surface. I am informed that on the south-west portion of Bentinck Island are to be found alley-ways in the form of bush fences, built in the shallow water, into which these animals are driven.

38. Human Flesh. Cannibalism.—Throughout North-West Central Queensland (as I wrote in 1896), though evidence of the practice is very meagre, and any information concerning particulars is but charily given by the aborigines, there is no doubt that the custom, gradually becoming more and more obsolete, takes place. Thus in the Boulia District, especially with children who die suddenly without any lingering illness, portions of the corpse may be eaten by the parents and by their blood brothers and sisters only: the reason assigned is that putting them "along hole" would make them think too much about their beloved little ones, though this is apparently contradicted by the fact that if the child has been ailing a long time previously, and becomes emaciated, etc., it will be buried. Proofs also are to hand that, within the decade ending 1895, true-blooded aboriginal children have been purposely killed and eaten at Noranside, Roxburgh, and Carandotta. In the more northern areas half-caste infants are not uncommonly murdered, either at the instigation of their white fathers or their assumed aboriginal ones; but to what extent, in the latter case, for the main purpose of providing food, it is impossible to speak with certainty. With regard to people of maturer years, those who have died suddenly and are in "good" condition at the time of death—not the old or the emaciated—may similarly be eaten: this rarely takes place in the Boulia or Cloncurry Districts nowadays, though many of the older men in these parts will relate numerous instances of its occurrence in the "early" times. The Kalkadun blacks of the ranges at the head-waters of the Leichhardt, etc., certainly up to the time I was making some investigations among them (in 1896), would eat any corpse, friend or foe, old or young, even in cases where the flesh was visibly rotten with venereal. Elsewhere, individuals who have been killed in inter-tribal warfare are left exposed where they fall. At Glenormiston, in 1892, on the occasion of a black having been killed by the tribe collectively for murder, a great debate was held as to whether the body should be eaten or not. It was only due to the presence upon the scene of the station-manager (J. Coghlan, from whom I received the report) that decided the question in the negative. On the other hand, it is only fair to state that, so far as I have been able to gather reliable information, I know of no case in North-West-Central Queensland where any adult male or female has been killed for the sole purpose of providing a repast.

On the Eastern Coast, at Cape Bedford, cannibalism is reported, by the blacks themselves, to have been practised in former years, though they would not eat women and children, who were reckoned as being too "soft." Those whom they did partake of were not killed for the special purpose of being eaten, and human flesh never constituted the regular food of the people. The hands and feet were always considered the choicest parts. The practice of eating human flesh was not confined to any particular class or sex.

In the Bloomfield River District, cannibalism has taken place since 1885, but the "subject" was never killed for the actual eating, and only eaten when dying suddenly in otherwise apparent health. It was solely the adults, both male and female, who were eaten: hunger was always the sole cause. R. Hislop has seen the whole of a female eaten, the bulk of the corpse baked, the bones broken and made into soup. As the same authority states, there was no special distinguishing term to express cannibalism, which had no special ceremony attached to it, was not confined to any particular members of the tribe, and was only resorted to when impelled by hunger. There was, however, one instance recorded here where the natives ate the killed on the battle-field, both sides joining in the repast, and subsequently resuming the fight.

On the lower Tully River, though the natives may actually kill to eat, the practice is exceptional, and met with only among the scrub blacks, not the coastal ones. In response to inquiries, the following reasons are given for its observance: As a punishment assigned to a woman for leaving her husband, etc.; for spite, e.g., their enemies killed in war used formerly to be eaten; for pure devilment. This last is really a true explanation, so as to give cause, for instance, for the commencement of a row at the next "prun" [regular organised fights for which special days are set apart]. A man has thus been known to purposely eat a woman in order to provoke a quarrel with her father: indeed, women are generally the victims in these cases. All parts of the body are eaten, though the legs and arms are considered delicacies, any remains being generally burnt. There are no special ceremonies or cooking-places connected with cannibalism, nor is any particular term applied to human flesh. It is only the men who indulge in the practice, and when relating its occurrence, etc., only do so in whispers; from an objective point of view, they apparently possess some idea of its being "uncanny" even amongst themselves.

Though carefully sought for, I have obtained no reliable evidence of cannibalism being practised in order to acquire any qualities, etc., of the deceased.

39. Narcotics, etc.—Though not actual articles of food, I feel constrained to insert in this Bulletin, before bringing it to a close, some few notes concerning the narcotics, etc., employed by the North Queensland aborigines.

The principal indigenous one is Pituri, which, if all is well, arrives in the Boulia district, in the rough, about the beginning of March. By "in the rough" is meant the condition, very much like half-green half-yellow tea with plenty of chips, in which it is conveyed in special dilly-bags for barter: the construction of these particular bags has been described in Bulletin No. 1, sect. 28. The pituri shrub (*Duboisia Hopwoodii*, F. v. M.) flowers about January. The supply for the Boulia district is obtained in the neighbourhood of Carlo (vel Mungerebar), on the Upper Mulligan. As a matter of fact, the plant grows further eastwards than this, though in scattered patches only—e.g., about 16 miles westwards of Glenormiston head station; a patch of it was also said (in 1895) by the Maitakudi aboriginals to be growing in one of the gullies at Cloncurry, on the Rifle Mountain, where the old target-range used to be. (According to notes taken about the same time) from Boulia and Marion Downs, from Herbert Downs and Roxburgh, messengers are sent direct to the Yuleolinya tribes at Carlo with spears, boomerangs, blankets, nets, and especially red-coloured cloths, ribbons, and handkerchiefs to exchange and barter for large supplies of the drug. On its advent at Roxburgh, the pituri may travel partly up the Georgina and partly along the ranges to the Kalkadun, who may supply the Maitakudi with it, but very little gets further eastward. From Boulia it is sent up the Burke, and so through the Yellanga and Kalkadun, again carried to the Maitakudi, or may be forwarded on to Warena and Tooleybuck. Marion Downs sends it *via* Springvale, etc., to the (middle) Diamantina, where it may go up as far as Elderslie and Winton, very little, if any, ever reaching the Thomson River. It may be stated, without fear of contradiction, that the export of the drug from the Mulligan opens the annual market, with all its ramifications of trade and barter, for the north-west Central districts. Arrived at its destination, the pituri is prepared for use as follows:—After roasting in the ashes the pituri-chips become pliable, so as to be easily bent, and are then wetted with water if in large quantity or with sputum if in small, and teased up with the fingers so as to remove all the bigger pieces. Some leaves of the *Acacia hakeoides*, A. Cunn. (PPT, pukartika), or of the *Acacia homalophylla*, A. Cunn., when the former is not obtainable, are next heated over the fire, and then burnt, the ashes being retained. The pituri in its moist state is now mixed with these ashes on some smooth surface, wooden trough, etc., and worked with the fingers into small rolls about 2½ inches long by ¼ inch diameter, which "quids" are now ready for chewing. Sometimes, the quid is teased up with some shreds of native flax (*Psoralea*) to give it compactness and intercoherence. When not being chewed, these rolls are carried worn above and behind the ear. Amongst the aboriginals there appears to be as great a craving for pituri as amongst Europeans for alcohol, a fact which is put into practical and economic use by drovers, station managers, and others: local blacks will usually give anything they possess for it—from their women downwards—"not for the purpose of exciting their courage or of working them up to fighting pitch, but to produce a voluptuous dreamy sensation." Pituri may sometimes be smoked in pipes, as reported to me by Mr. Reardon, of Carlo, when the Mulligan blacks run short of their tobacco supply. The Kalkadun blacks speak of the drug as *moda*, the Boulia natives call it *tarembola*—a different name in each district.

At certain of the corroborees on the lower Tully River some of the blacks will chew, and spit out again, the leaves of the "stinging-tree," *Laportea* sp. (MAL, dungan). The immediate effect is apparently a condition of frenzy, in which the individual may take violent action on his mates, or perhaps more commonly produce in himself a grossly disgusting perversion of the alimentary functions which enables him to eat human excreta.

Speaking of the Endeavour River natives, Lieutenant Cook says, "Whether they are acquainted with any plant that has an intoxicating quality we do not know, but we observed that several of them held leaves of some sort constantly in their mouths, as an European does tobacco . . . whatever it was, it had no effect upon the teeth or lips."

With very few exceptions, tobacco is now known to, and indulged in, by most of the blacks throughout North Queensland: among such exceptions are the natives of Bentinck and Mornington Islands. During the present year, when visiting the latter, some four men were presented with pipes and tobacco, but, before they could be prevented, two of them swallowed, without even chewing, the half-pieces of plug given them: they apparently thought it an article of food, and accordingly one ran into the forest, whence he soon returned with a bark troughful of cooked fish, which, under the special circumstances of a first visit, common courtesy compelled me at least to taste. Where European pipes and tobacco are scarce, segments of bamboo—indigenous, obtained in barter, or washed ashore—are brought into requisition. The one extremity of such a segment is closed, with bee's wax if necessary, and a small hole drilled at the side in its proximity. Tobacco-smoke from any ordinary pipe is expelled into the open extremity of the bamboo, whence it is inhaled through the drilled aperture by the other individuals to whom it may in turn be handed. The process may be reversed, the smoke being expelled into the smaller, and exhaled at the larger, opening. On other occasions the bamboo may be closed at both ends, two holes being drilled laterally, one at either extremity, each answering its purpose as before. No matter these variations, the segment acts as a reservoir, not only in preventing waste, but also in enabling several individuals to enjoy the benefits of the one pipeful of tobacco. In addition to exhaling in the ordinary fashion—through the mouth—smoke is very commonly ejected through the nostrils. When tobacco is not procurable at Mapoon, the aboriginals will smoke *Granadilla* (*Passiflora quadrangularis*, Linn.) leaves, but I do not know of any indigenous plants utilised elsewhere at such times. At Quamby, in the Cloncurry district, the Kalkadun blacks used often to prepare their tobacco in a manner similar to the pituri, mixing it into a quid with ashes of the *Acacia homalophylla* leaves, and then chewing it.

Opium, obtained mainly from the Chinese, is exerting a far more deleterious influence on the aboriginals than alcohol: the usual method of indulging the craving is to mix the smoked ashes (opium charcoal) with water, and drink it.

Though the blacks indulge in drinking water sweetened with various blossoms, &c.—e.g., *Banksia dentata*, *Bauhinia Carronii*, *Calamus australis*, *Livistona humilis*, *Pandanus* sp.—it is never allowed to undergo fermentation.

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FIG. 1.

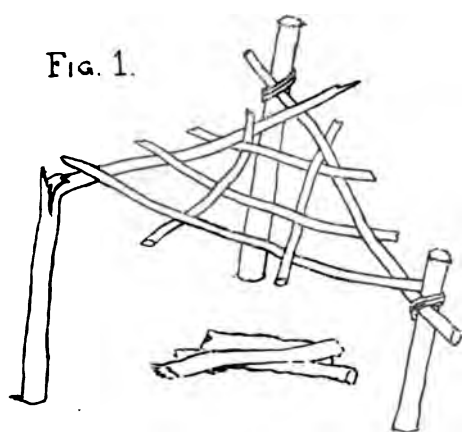


FIG. 2.

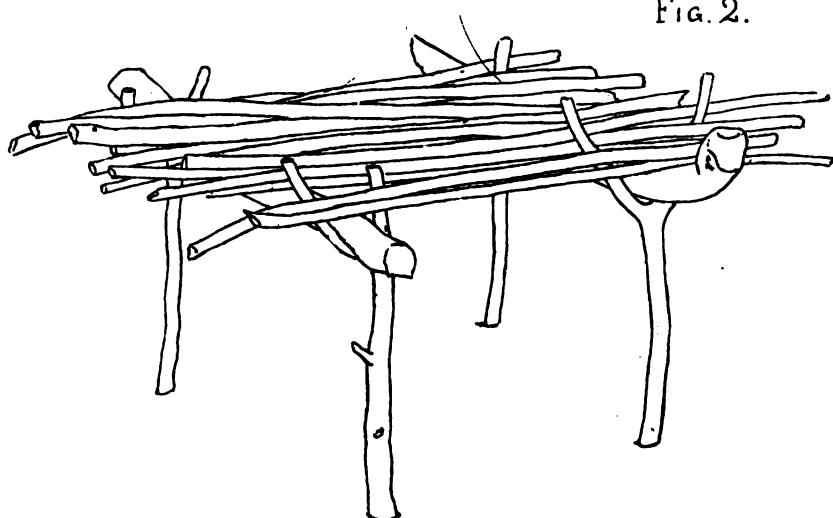


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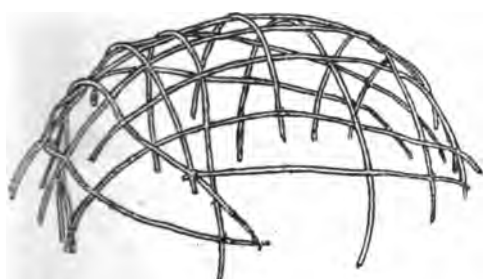


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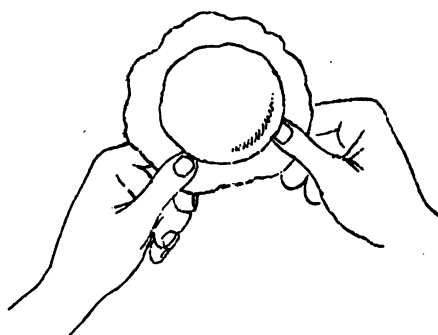


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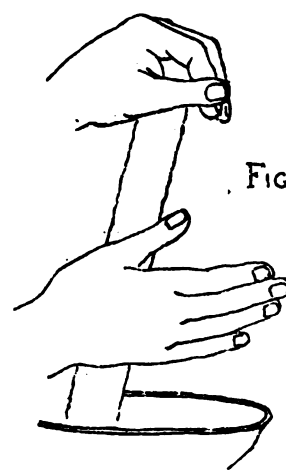


FIG. 6.



FIG. 7.

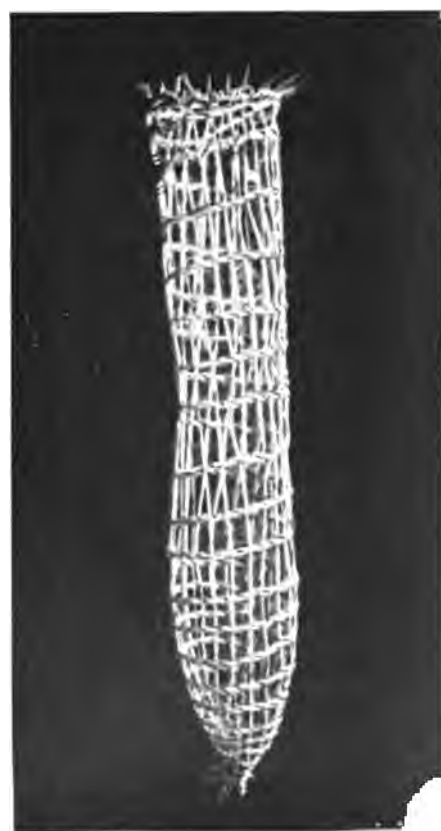


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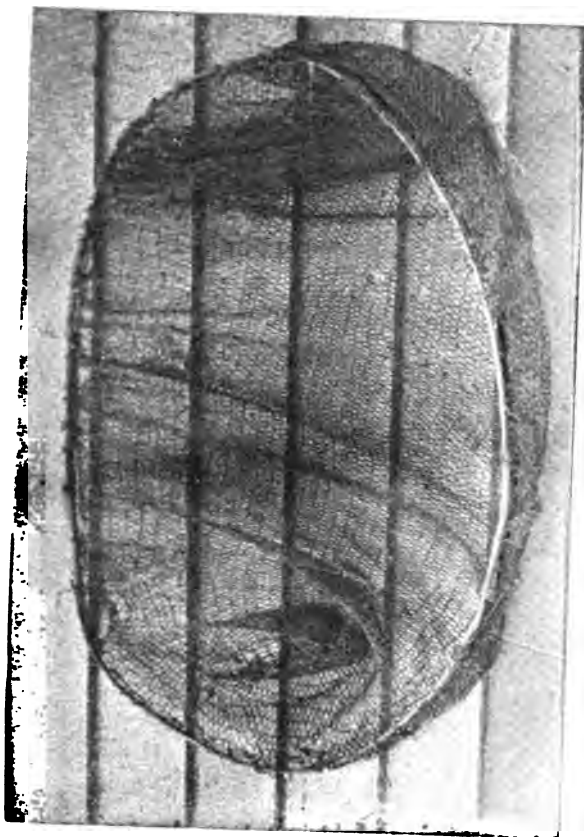


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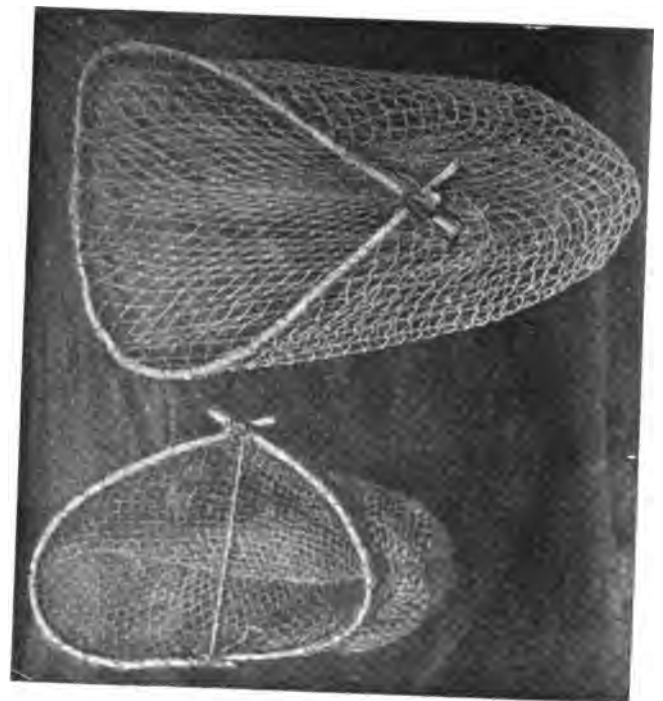


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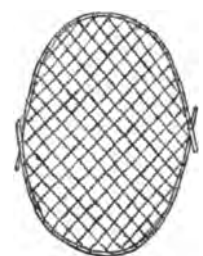
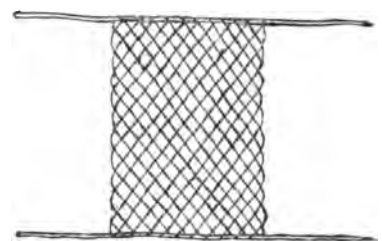


FIG. 9, 10.

FIG. 14.

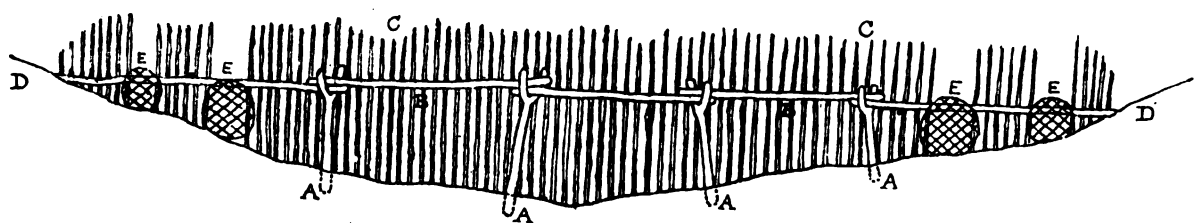


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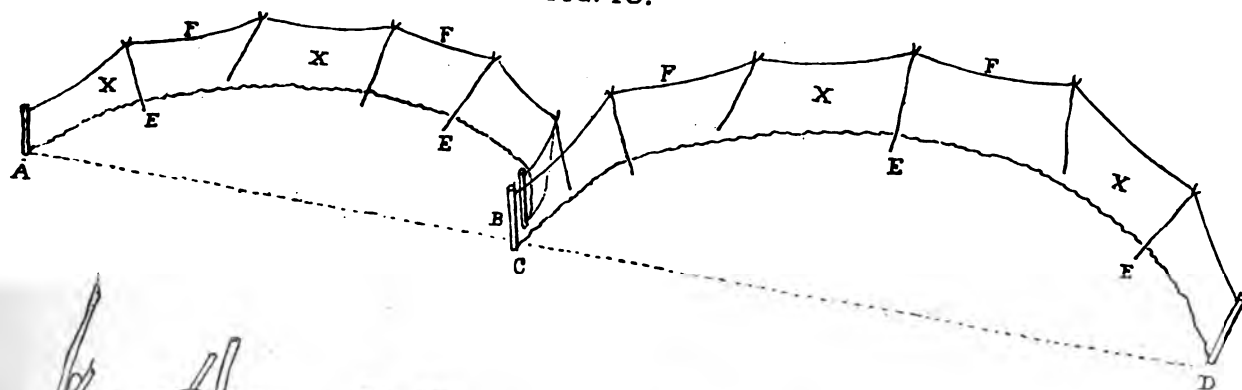


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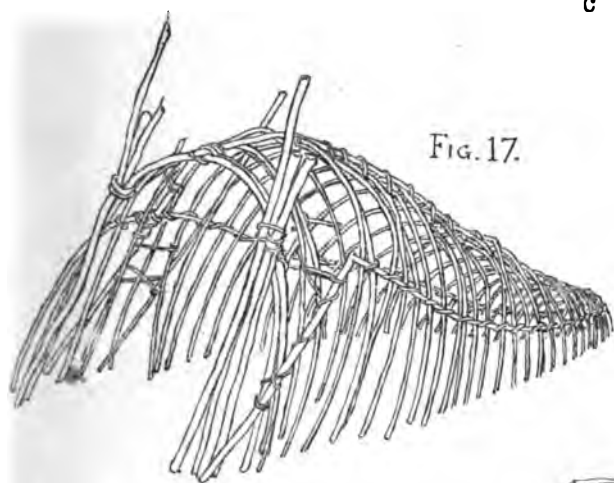


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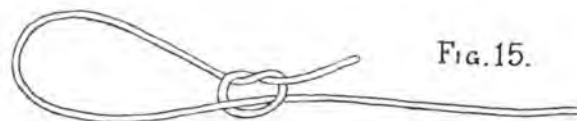


FIG. 19.



FIG. 18.

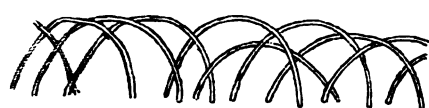
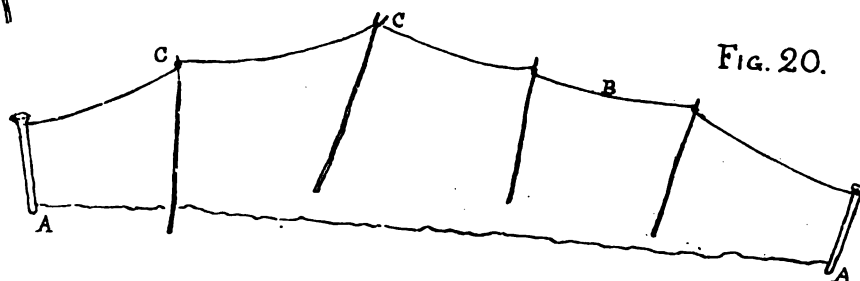


FIG. 21.



FIG. 20.



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Fig. 22

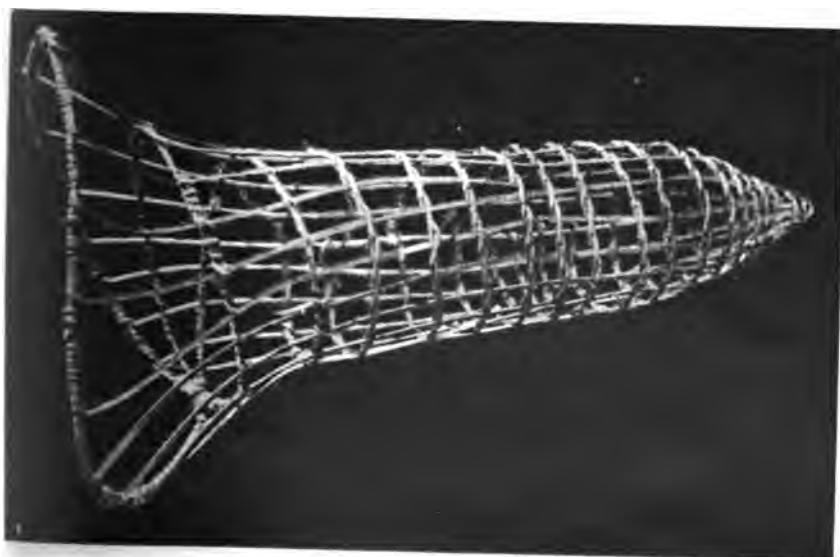


Fig. 23.



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MARCH, 1902.

GAMES, SPORTS AND AMUSEMENTS.

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PREFACE.

IN perusing the literature relative to the Australian savage, one cannot help being struck with the comparative paucity of information descriptive of his games, sports, and amusements. So far as the North Queensland aboriginal is concerned, I trust that the following pages will, in a small way, remedy the deficiency.

Mr. B. Etheridge, the Curator of the Australian Museum, Sydney, has very kindly furnished me with the references in the foot-notes.

Mr. H. W. Mobsby, whose services were requisitioned by the Home Secretary from the Agricultural Department, has rendered me every assistance in the photographic portion of this bulletin.

A portion of the following bulletin was originally read as the Presidential Address (Ethnology Section) before the Science Association Congress, Hobart, 9th January, 1902.

The abbreviations indicative of the different tribes are identical with those already given in the previous bulletins: the only new one is YID, referring to the Yidinji blacks occupying the valley of the Mulgrave River, the adjacent coast-line, the Murray-Prior Ranges, and Cairns.

W. E. ROTH.

Cooktown, February, 1902.

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GAMES, SPORTS, AND AMUSEMENTS.

1. Classification.—At the very outset, I may be allowed to express regret that the classification of the subject-matter which has been adopted in the following pages is only tentative, though, on the other hand, it has been found to answer the purpose of allowing the many different methods of recreation and amusement to be arranged in certain well-defined groups. These groups, without any attempt at placing them in their order of origin and development, or relative importance, may be briefly noted as follows:—Imaginative games, as the name implies, deal with tales, legends, and other fancies of the imagination. Realistic ones include the pleasures derivable from actual objects of nature, organic as well as inorganic; the same feelings which prompted me as a little boy to catch flies and keep them alive in specially constructed paper boxes, to splash the water about whenever I had a chance in the bath-room, or to have a slide so often as any convenient stretch of mud or ice presented itself. Imitative games constitute far and away the largest category, and may be again subdivided according as they deal with objects and phenomena of nature, or with human actions. The former may be represented by means of attitudes and movements, by string, finger-prints and sand-pictures, and by pigments. The latter can be discussed according as they refer to matters of domestic or “home” life, methods of hunting, ceremonial, and warfare. Discriminative sports include the various forms of hide-and-seek and the guess-game. Disputative games comprise wrestling and a variation of the tug-of-war. Toys, or specially manufactured articles, all present the peculiarity that the source of the enjoyment consists in the particular form of motion which may be imparted to them: I may perhaps be allowed to call them propulsive games. Music, which may be either vocal or instrumental, constitutes another of the groups (exultative games) to which attention will be directed. I shall finally have a few words to say with regard to games introduced of late years by missionaries, settlers, and others.

2. Imaginative Games.—No small difficulty has been experienced in separating certain of the fables and stories which are told for pure amusement from those which, in the minds of the aboriginals, are explanatory of the many natural phenomena around them. Though at first sight it might appear that the intent of some of the tales in the former series is to point a precept or moral, I am afraid that, with few exceptions, such is far from either being the case or serving the purpose—the pleasure derivable from their recital lies rather in the craft and wit delineated, together with the local colouring and personal address of the speaker. The light in which such stories are regarded varies markedly in different districts. In the N.W.-Central areas, the women, and those men who are “lazy”—i.e., those who are always loafing around the camps—are the best hands at telling them: an individual in the full vigour of mental and bodily physique looks upon it as womanish and childish, almost derogatory, to know anything concerning them, and will almost invariably refer to his gin when any such matters are enquired of. At Princess Charlotte Bay (east coast), on the other hand, it was the men who prided themselves on spinning these yarns, and many a night have I spent in the camps listening to their narration, each tale being interpreted for my benefit. In all cases these stories appeared to be well known to the tribesmen of the particular individual relating them, and hence, locally, might almost be described as national, so much so, indeed, that it was of no uncommon occurrence for the reciter to be suddenly interrupted and corrected, and the general thread of the story to be resumed only after four or five disputants had had their say. Still further south, among the scrub blacks (*not* the coastal ones) along the lower Tully River, we come upon the professional storyteller (MAL, *maln-kal*): such an one can tell no end of tales, mostly of personal experiences (mostly imaginary). The art is apparently hereditary here, being handed from father to son.

3. The following will serve as **examples** of some of these stories:—

(a) *How the Row Began* (KRA).—A very long time ago a blackfellow was casting his net in a small pool, when he caught a crayfish, which he was just about to eat, when another aboriginal rushed up, saying, “Here, stop it; that’s my mother you’ve got hold of,” at the same time pointing out the sexual characteristics of the crustacean in question. The fisherman, of course, not wishing to eat his neighbour’s relative, threw the animal back into the water, and took his departure. Next day some other boys came along to the same place, cast their nets, caught the very same crayfish, and, in perfect ignorance of what they were doing, cooked and ate it. The crayfish’s son getting to hear of it followed both these boys to their camp, and during the course of the night put a rope round their necks and strangled them. The friends of the victims retaliated, the brothers of the crayfish’s son did the same, and so death for death has been avenged ever since.

(b) *How the Small Bird Overcame a Big One* (KRA).—The bangapan or redbill is a very little chap, with white tail and red legs: the pygmy-goose, on the other hand, though comparatively small itself, is a much bigger bird. Well, it happened one day that the redbill was hunting for lily-seed in a waterhole that actually belonged to him, when a pygmy-goose came flying by, drove him away, and gathered the seed himself. The redbill, being too small to act on the defensive, bethought him of a piece of bloodwood to make a crocodile of, but the log floated downstream when he threw it into the water. He next tried a piece of white gum, but that was also too light, so he finally threw in a huge block of ironwood. This sank to the bottom, and the redbill made a crocodile out of it. And on the very next occasion that the pygmy-goose came to get some lily seeds the crocodile made a meal of him.

(c) *Small Things—even Feet—are not always to be Despised* (KWA).—The kangaroo-rat took his quarts-spear with him and went to look for a sweetheart. He met a dugong—for in those days dugongs lived on land—and asked her to be his wife. But she said, “No, your hands and feet are

too small." Indeed she was that tickled at what she considered so unimportant an individual's impertinence that she ridiculed him to her friends, who, on the very same evening, introduced the subject into their corroboree by singing aloud, "Kangaroo-rat! Kangaroo-rat! Only fancy! He wants to marry one of us. Look at his small hands! And what small feet!" Naturally enough the rat resented such treatment and let fly his spear into the very midst of the singers, wounding the particular dugong who had refused his offer. Some of her mates taking fright fled down into the salt water: others, more courageous, turned on their assailant but never succeeded in catching him. His tiny feet, about which he had been so much taunted, gave the rat his loop-hole for escape.

(d) *The Devil outwitted by the Human Soul* (NGG). (N.B.—The soul or spirit of the deceased—the *amwo-o* of Mapoon, the *nqai* of the Pennefather River—is recognised mainly by the smell.) The "devil" came up from the south with a great many spears stuck into him—head, front, and behind: indeed so covered was he with them that he could only just manage to crawl along with the aid of two sticks. At length he found his way up to a lagoon in the vicinity of the Pennefather when he started picking out some of the spears and washing his wounds. On turning his head to remove one of the spears stuck in behind he recognised an *amwo-o* on the banks above hunting for sugar-bag (honey). The latter, being frightened, made tracks for his camp but on gazing behind soon realised that the devil was not only following but gaining on him. He therefore made for the sea coast where, in the salt water, he knew that he would be safe, because here he could not be smelt. The devil followed precipitately, but, at the water's edge, becoming encumbered with the spears, he stuck in the mud and sank there.

(e) *How the Crocodile got a Wife* (NGG).—In the days of long ago, there was no river at all in the neighbourhood of Mapoon. A crocodile happened to be digging and delving about, thus upsetting the general contour of the place, when all of a sudden the earth gave way, and a river—what is now the Bavaria—rushed down headlong into the sea. A large mob of blacks found themselves on the one (northern) side of the stream, and awaiting to cross it, shouted out to the saurian, "Here, you've been making this large river: just you take us now across to the other side." The crocodile told as many as could, to crawl on his back, but so many were there that some had to sit on his head, while others did their best to stick onto his tail; at any rate, he succeeded in carrying a good number across. He went back to fetch the remainder, and all, except one woman, managed to jump up: she, of course, wanted to come too, but he had a good look at her, and said, "No: I'll fetch you next time." Having again brought his load safely to the opposite bank, the crocodile returned a second time, and told the woman he was quite ready now; so she got on to his shoulders and held on tight. When the brute got her about half-way across the stream, he reckoned he could do what he liked, now that she was separated from her companions. So he dived down, and swimming under water, and swimming and swimming, never came up to the surface until he reached the Pennefather River. Thus it came about that the Mapoon blacks lost one of their girls, and the crocodile captured his wife.

(f) *The Lady Scored* (Pr. Charlotte Bay).—Mother tortoise, one hot afternoon, feeling very thirsty went to get some water, but not being able to find any, asked her lord and master where it was. He was a selfish beast and told her he had drunk it all. This, however, was a lie, for he was keeping it safe under each arm-pit in store for the dry season. She also had her suspicions and threw a lighted fire-stick at him: this made him raise his arms in astonishment when,—down fell the water, and she quenched her thirst.

(g) *An Aboriginal "This-is-the-House-that-Jack-built"* (KMI).—The lizard and native-cat had joint ownership of a dog, with which they went out hunting: some blacks, who happened to strike their tracks, followed them. Now the lizard had a mosquito for wife, but she was a little gad-about, who would never stay at home, but spent most of her time wandering up and down the banks of the Palmer River. The lizard's mother had therefore always to stay behind, and mind the house, where she occupied herself in weaving dilly-bags. Happening to look up from her work, she noticed a bat travelling in the wake of the blacks, and accordingly sent word to her son to return as speedily as possible: between them, they coaxed the dog to worry the bat, but contrary to expectation, the vampire killed the dog. The lizard and native-cat thereupon made an end of the bat, the blacks killed both lizard and cat, and the old woman put the finishing stroke on the blacks.

(h) *Do unto others, etc.* (Pr. Charlotte Bay).—One very hot day, a blackfellow was chasing an emu, and driving it on and on, at last forced it to lie down exhausted under a log: not contented with this, he teased it by walking round and round, taunting it with what he was pleased to call its laziness. When at last he thought he had done enough mischief, he turned to go home, and on his way met a mob of Morehead natives from whom he begged for rest and shelter: they, however, had heard of his treatment towards the emu, and ordered him to clear out. Staggering along, footsore and weary, he next came across some Musgrave boys who, for the same reasons, gave him similar reception. He was thus forced to wander on to the 18-mile, but here also the Kokowarra boys would have nothing to do with him. At last, hungry and tired, he found his way home again to the McIlwraith Ranges, where his parents cried for joy on his home-coming, although he had been deservedly and correspondingly punished for the way in which he had treated the emu.

(k) *The Two Fishermen* (PPT).—Two blackfellows, a Yanda and a Pitta-Pitta, having made some nets, went fishing in the Booloo-Booloo water-hole [on the "15-mile Creek" branch of the Hamilton River, where the Winton road crosses it, about 15 miles from Boulia]. By and by Malkari [a certain powerful spirit] said to them, "You move on to another water-hole. I want this one for myself." So they turned round and made tracks for Parapijori [= Parapituri water-hole on the Georgina River], and as they drew near their destination they saw a lot of hawks flying about: thus they knew that some one was already camped there. Nevertheless they went on, and as soon as they reached the water's edge, recognised a large number of blacks on the other side of the river. The latter shouted out, "Hullo: you two fellows! What do you want?" And got for answer, "We are looking out for fish. Let us have a small place [to fish in]. We've only got a small net." The necessary permission having been granted, the two visitors went out into the middle of the water-hole, and driving their hosts out of the way, got

all the fish for themselves and returned to Booloo-Booloo. When Malkari asked them where they had got such a fine haul, they told him a lie and said, "Oh! from a very small water-hole, and plenty of mud in it," so that he should not guess the exact spot. Soon afterwards, our two visitors again went to Parapijori, and did exactly the same as before: they turned away the whole crowd of friendlies, caught all the fish, and told Malkari on their return a similar tale as before. They played this trick so often, that at last the Parapijori boys got into a temper, and said "Let us all kill those two chaps": so they stuck some hook-boomerangs point upwards in the mud at the bottom of the water, and taking care to cast their nets earlier than usual, caught all the fish, and hid them behind some bushes. By and by, the two fishermen came up as usual, and noticing the tracks, exclaimed, "Hullo! Have you been catching fish this morning?" In answer to which the crowd replied, "No, none of us have been catching any this morning. But there were a lot of pelicans and shag playing about here: they caught them all," and words to that effect. So the pair again went into the water, upon permission being granted, hunted the others away as before, but, of course, on this occasion caught nothing. When their patience was finally exhausted [and wanting to know what was the matter below] the Pitta-Pitta said to the Yanda boy, "You had better dive down," but the latter excused himself on account of his wearing a large head-net. After a bit of wrangling, one of them eventually dived below, and as he remained under the surface rather longer than customary, his mate, wondering what had happened, dived down also: directly both of them were out of sight, all the Parapijori men jumped in, and having drowned them, stuck them both onto the hook-boomerangs at the bottom.

4. Realistic Games* (Animals).—Captured animals may be preserved alive, though with few exceptions, unless able to feed themselves, they soon perish of hunger. Thus, the Bloomfield blacks are very fond of playing with young rats, bandicoots, wallabies, etc., as pets, which they will tie up at night; but they never think of feeding them, with the result that it is not long before they are released by death. At Cape Bedford young birds, rats, frogs, etc., tied with a string are given to the children to play with; but any thought of supplying them with food is quite out of the question. So again in the Cairns district, to amuse the children and to give them a plaything, frogs are tied by the legs, and iguanas by the tail, with the usual results. On the lower Tully River small carpet-snakes may be caught, have their teeth rubbed down with a stick, and then be caged in gourds, calabashes, etc., until they die. The Kalkadun blacks of the Selwyn, etc., Ranges practise a form of "coursing," as follows:—A wallaby, dingo, rat, etc., having been previously caught alive, is kept for a time by means of string attached to one of its legs: when all the players are ready, and in position, the animal is let go, and must be caught with the hands only, no sticks, stones, or boomerangs being permissible in its recapture. On the border-line between amusement derivable from temporarily retaining captured animals as pets or playthings and domestication, attention may be drawn to the Torres Strait pigeons, cassowaries, etc., along portions of the eastern coast. After being caught and their main wing-feathers pulled out (Cairns district) or cut (Tully River), pigeons are thus suffered to wander in and out among the camps, picking up any scraps of food or seed that they can. Young cassowaries are also often captured and fed by the scrub-blacks on the lower Tully, allowed to grow up, living as best they can, and following the aborigines from camp to camp. Among these same natives pets may also be made of the ring-tailed opossum and the wallaby, both animals often straying away from "home" for hours at a time, hunting on their own account. Only in the case of the dingo does true domestication and training take place. The pups are caught young, brought into camp, and tied up by the leg until such time as they become reconciled to their surroundings. Sometimes a boy (on the Bloomfield) but more usually a gin is placed in charge of these animals: in the latter case it is a very common practice for her to suckle them if necessary. The aborigines appear to be very fond of their dogs, share their food with them, often speak to them as if they were intelligent beings, and do not believe in "suling" them one onto the other: in the latter case, they will indulge in violent outbursts of anger even with their children—a most unusual occurrence—for attempting to do so. In the more southerly districts, the domestic cat is now to be met with in many a camp: during 1897 in the vicinity of Gladstone, I came across some humpies belonging to blacks, whose stage of civilisation admitted of their even keeping fowls.

5. (Plants.)—At the Bloomfield, swinging on the lawyer-cane (*Calamus*) is a common pastime. The hanging creeper is cut from 2½ to 3 feet from the ground, and the children jump and run at it, or else get others to swing them: they hold on with the hands above and feet below, the knees being extended outwards (R. Hislop). I have noticed a similar thing along the Morehead River at the back of Princess Charlotte Bay. Among the northern Maitakudi and Grenada Kalkadun, a sort of skipping rope, *turi turi*, made from the roots of the *Bauhinia* or white-gum, is held by two play-mates who swing it backwards and forwards—they do not circle it: but whether this is a development of the Bloomfield, etc., game, or only an imitation of the European pastime, there is but little chance now of discovering.

6. (Inorganic Nature.)—(a) In the N.W.-Central districts, *Smoke-Spirals* are played thus:—Any leaf, small piece of light bark, or even a mussel-shell, by means of a peculiar motion of the wrist and arm, can be thrown in such manner into the dense smoke rising from an ample fire as to ascend with it like a spiral. There are different ways of holding the article in question, the most usual being represented in Pl. I., 1: the wrist is rotated outwards at the same time that the forearm is jerked sharply forwards and downwards, the object leaving the hand just at the completion of the movement. Another method of throwing the leaf into the smoke is to hold it between the fourth and fifth digits as in Pl. I., 2, and, with a motion of the forearm similar to that in the preceding, to rotate the wrist inwards: the Kalkadun, amongst whom I have noted this way of jerking it, speak of the game as *piri-jorongo*. A far easier and commoner method of throwing it is to make the firmly extended forefinger of the one hand act as a sort of spring on the other, Pl. I., 3, the leaf, at the moment of release, being shot at an angle into the smoke. At almost the opposite extremity of the State, in the neighbourhood of Rockhampton, I have seen the leaves of the brigalow (*Acacia harpophylla*, F. v. M.) similarly used in making smoke-spirals.

* Games in general: See Smyth, *Aborigines of Victoria*, 1878, I., pp. 176-80.

(b) Playing at *Mud-Slides* is very common in and among the moist salt-pans at the back of Princess Charlotte Bay: men, women, and children, all joining in the fun, and laughing at every mishap. A corresponding amusement is indulged in by the little boys along the mud banks, at low water, in the neighbourhood of Cardwell, etc. They get a longish piece of bark, rest on it with the left knee and shin, and balance themselves in front by holding on tight with both hands, Pl. I., 4. They obtain the necessary impetus by kicking backwards in the mud with the right leg, and, with this movement rapidly repeated, they can skim along the mud-flats at a comparatively high rate of speed. (As might at first sight have been suggested, I do not consider this particular pastime to be imitative of canoeing.)

(c) Bathing is, of course, always indulged in at any convenient creek or waterhole, and in its wake comes *splashing, diving, catching*, etc. One will dive either to elude being caught himself, or the better to enable him to catch others, any convenient rocks or water-bushes being utilised for purposes of eluding pursuit. Along the Bloomfield, among what may be called such aquatic sports, is one in which the individual will, with a long breath, dive under water, and, as he swims along, blow bubbles up onto the surface; others will try and excel him. This may possibly correspond to the "crocodile" game, a favourite one amongst the Princess Charlotte Bay blacks, where the surface bubbles, as the native dives along, is intended to imitate the reptile's tracks. The Bloomfield aborigines will also often see who can jump into the water from the greatest height, this being always done with the feet foremost (R. Hislop).

7. Imitative Games. (Objects and Phenomena of Nature—Imitated by Attitudes and Movements.)—(a) The mimicking, by means of attitudes and movements, of various animals, birds, etc., forms an important item in the diversions with which the aborigines will everywhere amuse themselves in their leisure hours. Emus and kangaroos can be very well imitated. With regard to the former (Pl. I., 5) the mimic's one arm and hand represent the bird's neck and head, his own head and neck being possibly covered with a bark or Government blanket, the extremity of which he tilts up, with a bunch of feathers held in the other hand, to indicate the tail. Where, however, the attitudes require too much "stage property" to produce realistic effects, I must warn the reader that it is somewhat difficult to draw the line of demarcation between this form of amusement as a game distinct by itself, and those to be dealt with later, which are distinctly connected with certain ceremonial—i.e., initiation—observances [sect. 26 (d)].

(b) "*Shark*" is played by little children at Cape Bedford. The two arms are twisted one over the other—Pl. II.—and represent a shark's movements in the water. A boy (or girl) rushes about with her limbs in this position, trying to catch whom she can.

(c) Very small children at the Bloomfield play "*March-fly*" as follows:—Shutting his (or her) eyes, the one who takes the part of the fly runs about trying to catch someone. As soon as successful, he makes an unpleasant noise (imitative of the insect's buzz) in the ear of the child caught and also gives it a pinch (indicative of the sting).

(d) As imitative of *ghosts, evil spirits*, etc., place must be found here for two other children's games from the Bloomfield (particulars of which have been forwarded to me by Miss Violet Hislop) named "*Wu-inggal*" and "*Burakul*." The former, though short, is a very exciting game, and is so named after a certain evil spirit, who is supposed to appear sometimes in the form of a man and sometimes in the guise of a woman. If it is a woman she is believed to be very beautiful, with shining skin as though it were smeared with grease, and to carry a sharp digging stick, which is supposed to be red hot. The children pretend it is night-time, and they make believe that they are all asleep. "*Wu-inggal*" enters the small camp which they have erected, searches until she finds her victim, and then runs the stick into her—the wound is never supposed to heal—and finally starts setting the camp on fire. But she is caught in the act, everyone jumping up and rushing out to give assistance in her capture. "*Burakul*" is also supposed to be an evil spirit: only he has the peculiarity of always making an extremely unpleasant noise, like someone taken very ill. When he catches his victims he tickles them until they are nearly dead from laughing, and then lets them go.

(e) For the sake of convenience, I will mention here the "*Moon*" game of Cape Bedford and the Bloomfield, although I admit having my doubts as to the propriety of doing so, the general run of the thing looking suspiciously like a remnant of some ordeal or ceremonial. On the Bloomfield it is usually indulged in when a number of children are about. First, one collects a lot of stones or bits of wood to represent food, one piece for each person. Then the other piccaninnies sit down in the form of a half-circle round two holes dug in the ground. One hole is supposed to contain pure water and the other poisoned water. The child who takes the part of "*Gitja*" (the Koko-yellanji term signifying the moon) goes some distance away with the bundle of sticks, etc., and hops backwards towards the half-circle. As she comes near, she asks the person on the right of the circle if the road is clear. She is told that the tree on her right is stinging-nettle, whereupon she takes a step in the other direction, when the person on the left of the circle pinches her on the leg, which causes her to fall down; this pinch is to represent a hornet-sting. She is nearly dead now, asks for drink, and commences to partake of the poisoned water, but is stopped. She then gives everybody a piece of the food: also a spare piece she gives to some one specially to keep for her, with instructions not to eat it. However, the particular child in charge gives everyone a bit of it, and, when *Gitja* returns, is unable to produce it: the latter then breaks through the ring and chases the culprit until she succeeds in catching her.

8. (Objects and Phenomena of Nature—Imitated with String.)—(a) With any fair length of twine, adult women and young children, of both sexes, will often amuse themselves for hours at a time. It is thus used in the form of an endless string to play the game known to us Europeans as "*cratch-cradle*."* Thus played with, it is met everywhere throughout North

* Bunce, *Australasiatic Reminiscences*, Melb. 1857, p. 75 [speaking of the blacks along the Western Port Ranges, Victoria]: "This morning we observed that they practised some little amusements among themselves, and some were playing with a puzzle made of string—"cudgi, cudgiok"—made from the fibre of a tree (*Sida pulchella*) common on the banks of the mountain streams, as well as occasionally on the banks of the Yarra. This puzzle was played between two individuals, and required two pairs of hands, in the same manner as the juvenile game of cat's cradle, common to our own country."

Queensland: also at Murray Island in the Torres Strait. In some districts it is even indulged in by adult men: it is the women and children, however, who are most partial to it. Among the local names applied to it may be mentioned the following: KYI, C. Bd., kápan: NGI, NGA, morkuru: NGG, aue-inga: KUG, man-jing: KLA, yirma: KRA, mianman: KWA, andai-ibi; MAL, kumai, kamaí. The first of these signifies in addition any cut or mark, and it is noteworthy that when these Cape Bedford blacks were first taught by the missionaries to read and write, and told that certain letters indicated certain sounds, and that a collection of such letters represented corresponding objects and ideas, they got into the way of speaking of words, letters, writing, etc., as kápan, a term which they still continue to use. Some of the figures are extremely complicated—e.g., Pl. X., 1, 2, the "Sun" passing through at least 8 or 9 stages before completion: the diagrams of course only attempt to make a record of the finished article. During the progress of manufacture such an one requires not only the hands, but even the mouth, knees, etc., to make the different loops, twists, and turns. In addition to variations in complexity, certain of the figures may be made with two endless strings—e.g., Pl. VII., 1; while to complete others again, it may be necessary to have one or even two assistants—e.g., Pl. V., 2. Strange to say, similar figures may be met with at distances extremely remote, with (Pl. X., 5) and without (Pl. VIII., 3) similar interpretations. The following notes, with the places where met with, will serve to amplify the illustrations:—

Plate III.—Mankind. Animals.

1. Two boys carrying spears. Atherton.
2. Two women fighting with sticks. (lower) Palmer River. See Pl. VIII. 7, 8.
3. Four boys walking in a row, holding each other's hands. Cape Grafton.
4. Two men walking down a valley. [Three and four people can thus be similarly represented.] Cape Grafton, Cape Bedford.
5. Man climbing a tree. [The hands are gradually raised to imitate the progress of the motion.] C. Bedford. See Pl. VIII. 8.
6. Kangaroo. Pr. Charlotte Bay. See Pl. XII. 1.
7. Pouch: indicative of a kangaroo. Pr. Charlotte Bay, Pennefather River.
8. Pouch: and so, a wallaby. (lower) Tully River.
9. Strictly represents a spear, see Pl. XII. 1, but commonly expresses a kangaroo speared. C. Bedford.

Plate IV.—Animals: quadrupeds and birds.

1. Bandicoot: indicative of the lobular arrangement of the internal fat. C. Bedford. See Pl. VIII. 3.
2. Bat: Flying Fox. C. Grafton.
3. Flying Fox: the "wings." (lower) Palmer R.
4. Two rats sitting side by side. (l.) Tully R.
5. Emu. Pr. Charlotte Bay.
6. Emu's nest: with the egg represented by a "match-box" bean.
7. Cassowary: the two legs. (l.) Tully R.

Plate V.—Animals: birds.

1. Cassowary. Atherton.
2. Eagle-hawk. Atherton. For Fish-hawk, see Pl. XI. 4: Hawk's Foot, see Pl. XII. 7.
3. Two cockatoos roosting side by side. (l.) Tully River.
4. Two white cranes. (l.) Tully R.
5. Giant crane. (l.) Tully R.
6. Duck in flight. Pr. Charlotte B., (mid.) Palmer R.
7. Bird's nest, in the bottom of a hollow stump. Pr. Charl. Bay.

Plate VI.—Animals: reptiles.

1. Water-snake. Pr. Charl. Bay.
2. Snake, in general. C. Bedford, Burketown.
3. Deaf-adder: the fingers of the one hand are moved to represent the teeth and mouth. C. Bedford.
4. Crocodile. C. Grafton, C. Bedford, (mid.) Palmer R. See Pl. VIII. 3.
5. Crocodile's nest, with egg. Pennefather R. "Iguana." See Pl. VIII. 3.
6. Frog. Pr. Charl. Bay.
7. Turtle: the "scutum." C. Bedford, Pr. Charl. B.

Plate VII.—Animals: reptiles and fish.

1. Tortoise: the "scutum." (mid.) Palmer R.
2. Turtle: the "scutum." Pennefather R.
3. Two fish. (l.) Tully R.
4. Fish. Atherton.
5. Mullet skimming along the water. C. Grafton.
6. Eels carried on a hooked stick:—(a common method of carrying fish). C. Bedford.

Plate VIII.—Animals: crustacea and insects. Plants.

1. Crab. C. Bedford.
2. Four shrimps, each "square" indicative of a crustacean. Pr. Charl. B.
3. Honey: the "cells" of the comb. C. Bedford.

N.B.—This figure has other meanings: e.g., the squares represent the—

- (1) Scales of—crocodile. (mid.) Palmer R. —iguana. Night Island. Burketown.
- (2) lobes of fat—bandicoot. (l.) Palmer R.
4. Wasps' nest. Burketown. See also Pl. XII. 8.
5. Hornet's nest [drawn on the flat]. Pr. Charl. Bay.
6. Hollow log: symbolic of the honey inside it. Pr. Charl. B.
7. Tree: with woman [thumb] hiding below. Pr. Charl. B.
8. Palm-tree: with man [toe] hiding below. Pr. Charl. B. [At Night Island this figure represents a woman with outstretched arms and legs, the lower loop indicating the vulva.]

Plate IX.—Plants.

1. Hole in limb of tree: opossum, honey, etc., inside it. Pr. Charl. B.
2. "Zamia" (Cycas) tree. Atherton.
3. Zamia: nuts. Atherton.
4. Two cocoa-nuts. C. Grafton.
5. Cocoa-nut. C. Bedford.
6. "Yams." Night Island.
7. "Yams": Pr. Charl. Bay. Edible lily root: (l.) Palmer R.

Plate X.—Inorganic nature.

1. Sun: clouded over. Really a stage just previous to—
2. Sun: with full rays. C. Bedford.
3. Sun: with full rays. Atherton.
4. Sun: setting on the horizon. C. Grafton, Atherton.
5. Moon. (l.) Tully R., Atherton, C. Grafton, C. Bedford Pr. Charl. Bay, Burketown.
6. Star. C. Bedford.
7. Star. (l.) Tully R.

Plate XI.—Inorganic nature (continued). Manufactured articles.

1. Clouds: hanging dark and heavy. (Really a stage just previous to the following figure, effected by separating the hands as rapidly as possible, so far as the string will allow, and at the same time making a hissing sound, to represent the)
2. Lightning. C. Bedford.
3. Rain. Night Island. [Identical with Pl. XI. 8.]
4. River: large and broad. Pr. Charl. Bay. This figure represents a Fish-hawk on the l. Palmer R., the two squares indicating the out-stretched wings.
5. Two rocks sticking out of water. C. Grafton, Atherton.
6. Hill, Mountain. Pr. Charl. B.
7. Boomerang. (l.) Palmer R.
8. Two Tomahawks. C. Bedford. [Identical with Pl. XI. 3.]

Plate XII.—Manufactured articles (continued), etc.

1. Four-prong spear. C. Bedford. It represents a speared kangaroo at Pr. Charl. Bay.
2. Canoe. C. Grafton, C. Bedford, Pr. Charl. B., Night Island.
3. Bark Canoe: the "stitches" at either extremity. Pennefather R.
4. Canoe on water: (the four hands rocking it). C. Bedford.
5. Fish-net: (similar figure to preceding).
6. Dilly-bag with handle: Pr. Charlotte Bay. Shell chest-ornament with hanging loop: Atherton.
7. Hawk's Foot. (l.) Palmer R.
8. Wasps' nest. C. Bedford.

(b) Occasionally the endless string may be arranged to represent certain ideas, on the flat (Pl. XII., 7, a Hawk's Foot, from the Palmer R.), on the ear (Pl. XII., 8, a Wasp's nest, from Cape Bedford), etc.

(c) At Cape Bedford the *lightning* game (KYI, derrimelli-balkalkal, i.e., lightning to-imitate) is played as follows:—Two children, some little distance apart, put an endless string round their necks, and in the loop each places a small stick: these are next turned in opposite directions so as to make a firm twist in the string (Pl. XIII.) The hands are at a given signal removed from the sticks, which immediately commence to revolve (assisted by the resistance exerted by each child pressing backwards), and finally get shot out amongst the surrounding playmates, who thus find themselves "struck."

9. (Objects and Phenomena of Nature—Imitated by finger-prints, sand-pictures, etc.)—Next to “cratch-cradle” the most general perhaps of all this particular group of imitative games is the drawing of different *animal- and bird-tracks, etc.*, in the smoothed sand, by means of the fingers, finger-nails, palms, small sticks, etc. After making several of these artificial tracks, I have seen the natives in the Boulia district finish up with a European boot-print, making it about 10 or 12 inches in length, and bursting out laughing at its ludicrous size. Even in the delineation of such apparently simple things as an animal’s track, a good deal of art and ingenuity is brought into execution. I have not met with any rock gravings, though in Glenormiston country, out on the Toko Ranges, I was informed by J. Coghlan in 1895 that up in one of the caves he came across a circle of about 18 in. diameter cut pretty accurately in a piece of solid rock: it may be mentioned here that the representation of a circle is only met with on weapons, etc., coming from and to the west of the Upper Georgina districts. Wooden gravings are to be seen on several of the western district implements, *e.g.*, boomerangs: they are executed by means of an opossum or kangaroo tooth fixed into a handle.

10. (Objects and Phenomena of Nature—Imitated with Pigments.*)—Rock paintings are met with in many districts throughout North Queensland, and were systematic search to be made would probably be found to be of more common occurrence than is usually supposed. I know of their existence at Clack Island, Cooktown, the Bloomfield, on the Palmer, at Hughenden, Mackinlay, Cloncurry, etc.

The first-mentioned locality has a peculiar interest attached to it, in that the paintings here were described in Captain P. King’s Survey of the Coasts of Australia, 1818-1822, pages 25-26. He says:—“The day after we arrived here [Princess Charlotte Bay], a boat from the San Antonio conveyed Mr. Montgomery and Mr. Cunningham to Clack’s Island . . . for the next ten feet there is a horizontal stratum of black schistose rock, which was of so soft a consistence that the weather had excavated several tiers of galleries; upon the roof and sides of which some curious drawings were observed, which deserve to be particularly described: they were executed upon a ground of red ochre (rubbed on the black schistus), and were delineated by dots of a white argillaceous earth, which had been worked up into a paste. They represented tolerable figures of sharks, porpoises, turtles, lizards (of which I saw several small ones among the rocks), trepang, starfish, clubs, canoes, water-gourds, and some quadrupeds, which were probably intended to represent kangaroos and dogs. The figures, besides being outlined by the dots, were decorated all over with the same pigment in dotted transverse belts. . . . As this is the first specimen of Australian taste in the fine arts that we have detected in these voyages, it became me to make a particular observation thereon: Captain Flinders had discovered figures on Chasm Island, in the Gulf of Carpentaria, formed with a burnt stick; but this performance, exceeding a hundred and fifty figures, which must have occupied much time, appears at least to be one step nearer refinement than those simply executed with a piece of charred wood.” Some seventy-eight years later, in 1899—during the course of a mission from the Government to present the coastal blacks with certain gifts, in return for rendering assistance to the pearling crews shipwrecked in the terrible cyclone at Bathurst Bay—I took the opportunity of visiting this out-of-the-way island, where I collected the following notes, which may be summarised, as follows:—In addition to drawings executed on a ground of red ochre, there are others drawn in outline on the rock-surface. Several of the caves are of such limited height that the drawings depicted on the roofs must have been executed by individuals whilst lying on their backs. A far larger proportion of paintings are to be found on the roofs than on the sides. Particular attention was paid to any signs of renovation, but only in the case of some of the white dots was there anything to give cause for suspicion. Red and white are the only pigments used here, no traces of yellow being visible. [This gave me no little surprise, because at Bathurst Head—the nearest point on the mainland whence the blacks must generally have crossed, *via* the Flinders—I found the “rough” pigments in the possession of the present-day natives to be most commonly yellow, red to be scarce, and white very rare: indeed, in the four or five cases here where I hit upon the white pigment, it was in very small quantity, carefully enveloped in a little piece of tea-tree bark, subsequently wound round with fibre-twine. On the other hand, it is possible that the blacks in those “early days” knew how to change the yellow into red, as is still practised elsewhere at the present time.] The figures represented, and corresponding with Captain King’s description above quoted, are:—Turtles (Pl. XIV., 1, 2, 3); lizards (Pl. XIV., 12); trepang (Pl. XIV., 11), sharks open-mouthed (Pl. XIV., 4, 5, 6)—a very common pattern—and porpoises (Pl. XIV., 13, 14). Starfish, clubs, canoes, water-gourds, and “some” quadrupeds were not seen by me: the fact of water-gourds being depicted here originally is very likely because, even at the present day, it is a common practice for the aborigines along this coast line to carry fresh water in these vessels when going over in their canoes to visit the outlying reefs and islands. Remaining objects not mentioned by Captain King comprise harpoons (Pl. XIV., 8), fish (Pl. XIV., 15), dugong (Pl. XIV., 7), and hands (Pl. XIV., 9-10)—the latter drawn independently of any tracing. The interpretations of the figures quoted were all based on the opinions of the aborigines who accompanied me.

In the close neighbourhood of Cooktown, several drawings are to be met with in the shelter-caves on the northern aspect of Mount Cook. Plate XV., from a photograph by Mr. A. Dean, shews an example of these. According to local blacks, the three right-hand (charcoal) figures represent men; the two remaining objects are said to be crocodiles, notwithstanding that one of these is minus a tail. Both the latter—one in charcoal, the other in yellow pigment—are peculiar in that they have been “finished off” with a thick white line all the way round. Among the rocks scattered about here are also to be seen life-size representations of the left hand: the white paint has either been sluiced over the hand held close to the rock, so as to leave a silhouette when it has been removed, or else painted close round it and the outstretched fingers, so as to produce a representation in outline. The Koko-yimidir aborigines of this district have no special name for this amusement beyond “kapan-balkalkal” (*i.e.*, a mark—to make, imitate, etc.), the same term as is applied to cratch-cradle, etc.; they tell me it is an amusement special to boys and young men. With regard to the Bloomfield, R. Hislop says that on many a vertical or overhanging rock are to be met paintings representing human beings, cassowaries, turtles, kangaroos, hands, etc., executed with charcoal, pipeclay, or raddle.

* See R. Etheridge’s Catalogue of Works, Reports, etc., on the Australian and Tasmanian Aborigines, for many references to Pigment Drawings.

At the water-hole on the old Normanton road, about 6 miles from Cloncurry, the "pictures" consist of a saurian type of figure, varying from about 12 inches to over 6 feet in length—and hence possibly representing a lizard, an iguana, or crocodile—painted in red ochre upon the blocks of granite.

11. Imitative Games. (Human Actions—Domestic.)—(a) Playing at "*Houses*," "*Grown-ups*," "*Marriage*," etc., is in one form or another as common among black children as it is among white ones. On the upper Normanby, the youngsters pretending to be married will build an impromptu hut and sit contentedly within its shade: suddenly a boy rushes forward to steal the gin, over whose possession he and the husband now make-believe to have a fight. On the lower Tully, the boys and girls will make miniature huts, etc., and finally go away in couples into the scrub. It is a game often being played, but whenever their parents catch them at it they generally give them both a good smacking. In the Cairns district little boys and girls often amuse themselves by playing at houses in this fashion: "You come into my hut—I've got some yams." "No," says another, "Just you come into mine: I've got opossum for you," and so on, each one vying with the other to make his own particular offer the more attractive. The following I have seen played by young women on Keppel Island:—With any small pieces of rock handy, a gin will set up what she calls a hut, a sort of baby cavern or grotto about 8 or 10 inches high. Kneeling just in front she throws straight into it as fast as she can—with right and left hand alternately—various small pebbles, etc., each being respectively the father, mother, and piccaninnies: these stones she catches up again, then throws them back, and so repeats the process over and over again, the whole being accompanied by some chant. When three or four women are playing, each with her little stone "house" in front, they get extremely excited over it. "Wu-ro" is the name of the game, but neither the words nor principles could be rendered intelligible to me: so again, the late Mr. Wyndham, the first settler on the island in the early eighties, told me that he found it played by the children but that he could never make head or tail of it. At Cape Bedford, the small girls often play at the preparation and cooking of yams and other vegetables, mimicking in the process all the actions of their elders.

(b) *Dolls** for the little girls on the lower Tully River are made from a forked stick or out of a lawyer-cane (*Calamus*). The former (Pl. I., 6) represents the child's legs, which can thus be fixed on to the neck to indicate a mother carrying her baby with its lower limbs dangling over the shoulders. The latter is split at one extremity, each split half being bent and kinked so as to form a "knee"; by pressure from above, these jointed legs can thus be made to assume different and equally ridiculous positions (Pl. I., 7). There is no more definiteness about these dolls—no head, arms, ornamentation, or dress. They are called kuchara, a Mallanpara term sometimes, though rarely, applied to a little infant. The parents generally make miniature dilly-bags for their children to carry these dolls in. At Cape Bedford forked sticks similarly constitute girls' dolls. In the Cairns district I have seen these playthings formed of pieces of bark wrapped up in grass, etc. On Keppel Island I observed girls and women nursing dolls in their arms like babies. These dolls in the form of cones, varied in length (up to 15 inches) and thickness, were coloured with red ochre, and named "kamma" after the grass-tree (*Xanthorrhoea*) from out of the butt of which they were cut (Pl. I., 8). Mr. Wyndham also noticed these toys when he first went there. As a result of a conversation which I held with two or three of the more intelligent of the women, I have good ground for believing that these cones are also intended as charms for begetting fine, strong children. [Are they of a phallic nature?] I met with several of these articles mixed up with the bones and debris in one of the shelter-caves in the North (Keppel) Island.

(c) "*Granny*" is a game played by boys as well as girls on the lower Tully River in mimicry of the sounds produced on being spanked by the old lady in question for being naughty. Putting the one hand high up into the opposite arm-pit, they sharply smack the elbow of the free arm on to the flank, calling out as they do "Papi," "Papi" (= "Granny," "Granny").

(d) *Plait-work* is met with as a pastime among the boys at Cape Bedford (Bulletin No. 1, sect. 11), in a form imitative of the handles of the dillybags met with further north.

12. (Human Actions—Hunting.)—(a) The *Honey-game* (KYI, murla balkalkal=honey to make or imitate, etc.), imitative of the search for honey, is played by two or more children. Squatting on the ground, each places the tips of the fingers upon the hand below, as in Pl. XVI., where three little girls are seen amusing themselves: these six hands represent the trunk of a tree. Each hand is now in turn knocked off from above down with a side-cut—the tree is being felled. Before knocking off the lowest hand, its owner puts her finger into each digital interspace (Pl. XVII.) to feel if any honey has dropped down; she pretends to find a snake there, however, and tells her mates so. All three next hold their hands behind their backs, and the following dialogue ensues:—A: "Have you a tomahawk?" B: "No!" A: "Are you sure you haven't one?" B: "I have a very little one." A: "Well, then, give me the little one." B thereupon pretends to hand over the imaginary tomahawk. B's arm, the wrist of which is held by A, next represents the trunk or limb in which the honeycomb is. A now makes a chop at the elbow (Pl. XVIII.), to cut off the limb, encircling (Pl. XIX.), as far as she can, the joint with her fingers, and from here rubs the limb respectively once upwards and once downwards, so as to indicate complete discontinuity. This little action is significant of the fact that with certain kinds of bees (e.g., old and new broods) the upper portion of the tree, where the comb lies, is "tabu" (KYI, tabul) to the women, etc., whereas the lower portion, where the dirt and drippings are, is "free" (KYI, dai-tchen) to them. A now does exactly the same to B's other arm, then goes over the identical process with O's arms, and finally does the same with her own. The honey is next supposed to have been collected from the removed limbs, and, mixed with water, placed in a bark, etc., trough, represented by all the cupped hands resting upon one another, as in Pls. XX., XXI. The trough is shaken up to make a good mixture, and each bends her head down in turn to get a taste. "Too sweet!" is the verdict they each give, and consequently a pretence is made of adding more water. As soon as arrived at the proper strength and consistency, they all make a show of eating it. It is a game played by young children, of both sexes, at Cooktown, Cape Bedford, and the McIvor River.

* See Cox, J., *Proc. Linn. Soc. N. S. Wales*, Vol. 3, 2nd series, p. 1223, for figures of the Gum-cement dolls from Queensland.

(b) *Catching Cockatoos* (KYI, wandar balkalkal = cockatoo to -imitate) is indulged in by little boys and girls in the same districts as the preceding. The more children there are in it, the merrier it is. Each hand is placed one on top of the other as before, but in this case the fore-finger of the hand below is encircled by the thumb and three fingers of the hand above. (Pl. XXII., XXIII.) These hands represent cockatoos sitting one above the other on a branch of tree. The one free hand in the group of players now makes a dart at the topmost fore-finger, the topmost cockatoo, which it catches in the fork between the fore and middle fingers, the fork being supposed to be a pronged spear. The "cockatoo" is then put up to the spear-owner's mouth (Pl. XXIV.), a click given—the sign of its being eaten—and handed in similar fashion to the other players, each in turn uttering the same note of satisfaction. The remaining birds are speared and disposed of on the same lines.

(c) *Playing Bean-tree* is met with among the little boys and girls on the lower Tully River. Several children sit down in a circle, and one starts the game by placing her one hand on her knee, and the other on top: the next child places hers similarly above, and so on, until there results a vertical column of little fists. Each hand is previously twisted out of shape by bending one finger over and behind the other, and when all the fists are placed in apposition, the thumb of the hand above is always made to rest on the little finger of the one immediately below (Pl. XXV.—the thumb of the second hand has accidentally got loose). This column of human flesh represents the bean-tree (*Castanospermum australe*), and each hand a bean. The girl (or boy) who directs the run of the game next removes the topmost fist by pinching up the skin on its dorsum, at the same time poking her fore-finger up into its palm (Pl. XXVI.): the hand thus falls off, with the fingers free, and lies limp, palm up, at its owner's side. One bean has been gathered. Thus gathering all the beans one after the other, the leader starts pretending to collect them, and finally running away to a distance is supposed to hide them in the scrub. The other players soon follow and commence trying to find them, but their efforts are of course in vain, and when she thinks they have had enough of it, the leader will tell them that a flood has suddenly come up and carried all the beans away.

(d) *Cracking beans*, another childrens' game practised in the same district, is in imitation of the sound of the nut cracking when being opened (by hammering with a stone) in order to get the kernel out. The palms are slightly apart, with the ring and little fingers interlocked, the tips of the fore and middle fingers touching: the interdigital space between the last-mentioned is widely open (Pl. XXVII.) With a sharp vertical movement on to the knee below, the fore-fingers, loosely separated from the mid-ones, are thus made to strike upon them with a sharp cracking sound.

(e) The *Duck* game played by little boys and girls at Cape Bedford, Cooktown, and the McIvor reminds me very much of the "oranges and lemons" of our own childhood's days. One of the little chaps takes a long stick, and, holding it up at an angle, allows its extremity to touch the ground: the attitude represents a man catching duck by means of a slip-noose attached to the end of a long slender switch. (See Bulletin No. 3, sect. 26). The other children pass round and round, bobbing underneath the stick in Indian file, when, all of a sudden, down it comes just in front of one who will thus be considered "caught." The latter is now dead, and has to lie down on her back, perfectly still, and with eyes closed. Another and another is respectively caught, until all are lying dead in a row. The child with the stick comes up to the first one and says, "Where do you come from?" "I come from Cooktown" may be the reply. "Well, then, go home to Cooktown," says the other, and with a poke from the stick she gets upon her feet and makes a bolt, ostensibly for home. And so with all the others.

(f) The game of *Tortoise* is also played in this same district, but only by boys. One of them will take a short stick in his hand, which he holds out back, after the manner of a wommera, which indeed it is supposed to represent. He then whistles to his mate, who plays the part of the tortoise. After a time the latter slowly raises his hands so as to get his fore-fingers on either side of the forehead: such action indicates the animal with flappers rising to the water-surface in answer to the "call." The boy with the imaginary wommera-spear then makes as if to let fly his weapon, whereupon the tortoise tumbles down dead.

(g) *Playing "Iguanas"* is practised by the boys in the Upper Normanby district as follows:—One of them will half-lie on the ground and dig his fore-arm, up to and including the elbow, into the sand. Here and there he will stick out a finger, and as it projects his mates will try and hit it with a stick. In this same district the lads also have a *kangaroo* and a *crocodile* game: in the former a boy will hop about here and there, after the manner of the marsupial in question, dodging as he goes the toy-spears which are being thrown at him: in the latter he will swim on the surface like the saurian he is supposed to represent, and expose himself to similar treatment.

(h) In the N.W.-Central districts, a whole party will be bathing together in the river, and while some may be imitating the actions and "calls" of various water-birds, others will hunt for and try to catch them.

(i) In the Carrington scrubs (Atherton district) the children will often amuse themselves in walking up certain trees. They will pull out a thin strip of bark, free it from below, and then drag themselves up on it with their hands, jerking off more and more of the strip as they advance. I have purposely mentioned this trick here, as I cannot help but regard it as imitative of their elders climbing trees—an exertion to which, with but very few exceptions, they are impelled only through the search for food, i.e., for purposes of hunting.

13. (Human Actions—Ceremonial.)—Among amusements derivable from ceremonial, one concerning which there cannot be doubt is the implement known to us English boys as the "*roarer*," "*hummer*," "*whirler*," etc., and met with throughout North Queensland. It is a flattened spindle-shape piece of wood, into one extremity of which an aperture is drilled (Pl. XXVIII., 1), and by means of which it is attached to a piece of string held in the hand or fixed to the end of a small stick: the whirler can thus be rapidly revolved, and with a sudden extra jerk given a little additional impetus so as to make it "roar." The extremity of the hummer further from the aperture is sometimes cut off obtusely (Pl. XXVIII., 2). These playthings vary from 3 to 6 inches in length, are never grained, but may be painted. In the N.W.-Central districts they are used indiscriminately by either sex, and at any age:

on the Bloomfield (KYE, teripa), Lower Tully (MAL, chachalmo), and at Cape Grafton (KUG, birbo-birbo), they are employed by young men and boys only. At the Bloomfield, the method of using them is taught at the first initiation ceremony, though the boy so taught can play it in public, and before women, subsequently: on the Tully it is believed to have been introduced only within recent times, and made by the big boys to frighten little ones.

On the Tully, and at Atherton, the boys will take any light flat piece of wood, and, holding it vertically, will, with an apparent initial swirl, throw it face forwards against the air, so as to produce a humming sound. The Mallanpara call it pirbu-pirbu (*cf.* Cape Grafton name for the "whirler"), the same term as applied to their toy—"cross."

Wrestling (sect. 17), as well as some of the corroboree dances, *might* be originally derived from ceremonial. The yiki-yiki of the Bloomfield (sect. 29) is taught at the initiation performances.

14. (Human Actions—Warfare.*)—Wherever blacks are to be met with, the little boys indulge in aping the arts of war as practised by their elders. The miniature weapons so employed are either manufactured for them by their older male relatives and friends or else designed by themselves. Toy spears are thus made from light thin withes or else from grasses, reeds, and rushes, *e.g.*, *Andropogon schænanthus*, *Imperata* *sp.* They are held at their lighter ends, and thrown either with the hand held as in Pl. XXVIII., 3 [which it should be noted is held differently to the fighting weapon] or with the toy wommera. The latter can be made of a piece of wood, with a flattened projection at its extremity, on lines identical with the full-sized article as met with among the Wellesley Islanders and coastal blacks westward of Burketown (Pl. XXVIII., 4). In other cases (*e.g.*, from Cape Grafton up to Princess Charlotte Bay), the toy wommera can be manufactured from a rush by splitting its end, removing the pith from one of the split halves, and tying the cortex in a loop round the other: the loop retains the reed-spear in position (Pl. XXVIII., 5). Another kind of toy spear has so far been observed (A. Buhot) only among the coastal blacks to the west of Burketown, and at Wollgorang (Northern Territory border). It consists but of a straight wither from 2½ to 3 feet long, more or less pointed at its extremity, and projected with a string which is prevented slipping by the friction presented by a knot: Pl. XXVIII., 6, 7, will explain matters more graphically. The question naturally arises as to whether the string, thus used, is a primitive condition, or only an adaptation, of that highly specialised implement, the wommera or spear-thrower. In those districts where shields are employed by the adults, these may be imitated on smaller scale, and often with similar ornamentation, out of convenient pieces of bark, etc. As will be stated further on, there appears to be some doubt as to whether the toy-boomerang is really imitative of the fighting article, and its description is accordingly deferred to sect. 22.

15. The regular tournaments which take place in the Cardwell and Tully River scrubs require more than passing notice. To the Mallanpara blacks this institution is known as the Prun: it is essentially an entertainment—though the opportunity may be taken of wiping off old scores, and so settling disputes, either real or imaginary—and gives the men a chance of showing off their prowess and courage before the women.

(a) All the year round, except at flood-time, the blacks regularly meet at the prun-ground or Puya (MAL). This ground, which is shifted every two or three months, consists of a large cleared circular space, and is usually reserved for these particular fights (with general corroborees). There is no ceremony, etc., at its inception when it is being constructed, nor are any neighbouring trees marked or in any way ornamented. The prun takes place every seventh or thirteenth day in the Tully and neighbouring district, the latter now merging into the fourteenth, so as to hold it of a Sunday, to suit the convenience of the white settlers, by whom many of the natives are employed: but why these particular (original) intervals have come to be chosen—and it must be remembered that these intervals vary in different localities—is beyond the knowledge of the blacks themselves. It should be noted here that in those districts where such tournaments are regularly held the blacks have special terms for counting the number of days intervening: in all other districts they can count up to three, or perhaps four, only.

(b) The tribe on whose territory the prun-ground happens to be is always the first to arrive there on the day appointed—early in the morning—and takes up its position. Some few days previously a messenger has been sent round to the various camps reminding them of the date: no particular person is sent, nor is he specially decorated in any way, and he does not tell them whose quarrels, should there happen even to be any, are going to be dealt with. At any rate, it is considered the duty of everyone who has been so informed to attend on the day appointed. Well, the people who get there first, and have their own camps there, decorate themselves, as the case may be, on the edge of the ring (*i.e.*, where their butts are). The decoration followed is that of Pl. XXIX., the special fighting costume, formed of cockatoo feathers. Those who subsequently come up get ready at a place somewhat removed from the ring, and put in an appearance there only when fully "rigged up." Such men, fully decorated, are known as the ulmba: they are the "picked" ones who have to uphold the honour of their particular mob, and are accompanied by other males (not ornamented so much) and females (not decorated at all). With them are four women in particular who carry spears (pointed at their butts—the chukaji spear). All advance in a body, and rushing into the ring do a half-circle round, being led by two or three in the van who, with the direction in which their spears are held, show the route to be followed—there is no speaking: all of a sudden they stop, congregate together as close as possible into one surging mass—with shields, swords, and boomerangs held on high (Pl. XXX.)—give a lusty shout, and retire to that portion of the edge of the circle at which they entered it, sit down, and wait there.

And here they stay while the next two or three mobs come up, with same performance in the centre, etc., each tribe taking up its temporary quarters at that edge of the ring where it originally entered and approached.

They all then rest at these particular positions until the sun is about half-way between mid-day and sunset.

(c) The tribe to whom the ground belongs is supposed to start the proceedings by some one or other of the following methods after having entered into the ring:—

- i. One, or may be a couple, of the men will let fly a boomerang or a spear into the mob with whom they want to have a "go-in" with.

* Warfare Games: see Smyth, *Aborigines of Victoria*, 1878, I., p. 178.

- ii. One fellow will get up and "jaw" at the others collectively, or at one of them individually. It was a case of the latter which started one of the fights which I witnessed. The challenger had had his gin stolen by a man in the opposing mob, and he was employing all the most filthy epithets he could use to get his man to show fight. Before the latter had time to answer, an old virago from the opposing side came forward biting her spear, throwing it with full force into the ground, plucking it out again, stamping and yelling all the time, and rousing herself to a pitch of excitement: and then *she* gave the challenger a sound tongue-thrashing, heaping upon him all the most beastly terms she could think of, winding up at last with something to this effect:—"What do *you* want your wife for? You were always growling about her when you had her. You said she always had her courses on, and that she was no good," etc. She may also accuse him of masturbation: a great insult to a married man.
- iii. The whole mob will start taunting the others collectively, making remarks about them, and trying to hold them up to ridicule and contempt. They generally get hold of something concerning their women.
- iv. Often as not, neither singly nor collectively, is there any real cause for quarrel; but they make a start and find one, "out of pure cussedness" almost, it might be said.

Perhaps the other side thus challenged will only get up and stand out (with their weapons, of course), and reply verbally in similar strains. Should this turn out to be the case, one of the challenging mob will come up to those he is trying to rouse up, and, pointing his spear at each, will tell them what *his* lot will do to them if they don't fight. If any one fellow thus individually challenged does not want to fight the one who particularly wants to pick a quarrel with him, he will just put up his shield: his aggressor will thereupon taunt his tribe for owning such a coward, and thus, by pressure from his own people, he may be forced to act on the defensive. But even this may not draw blood, so one of the challenging side will probably sneak right round and let fly a boomerang into the women and children squatting at a little distance outside the circle. Now, it is a well-recognised law that no fighting is permissible outside the circle, and any flagrant breach of the rule such as this generally puts the finishing touch on, and the battle commences in earnest.

(d) The combat may be either single or general: the former due or not to some private or personal grudge, in which the others may or may not join. Thus, the others will not join a man challenging his own uncles (father's or mother's brothers), a thing he not infrequently does if he considers himself to have been slighted by them: they not having been to visit him, or not having sent him any food present. Such a man will get his uncle into the ring and whack with a sword at the shield with which the latter defends himself: finally the uncle puts the shield down and kisses, or rather blows on, his nephew's cheek: they are friends now. Another sign of friendship at a fight, or a sign of the fight having wiped out the cause for quarrel, is for the opponents to clash the flats (fronts) of their shields together.

During the actual fighting spears are generally the first things to be thrown (generally at the legs, anywhere below the knees), then as they get nearer the boomerangs are let fly (at any portion of the body), and, finally, when they get to close quarters the swords are used for striking at the head from the front. It is wonderful to watch how easily and how gracefully these cumbersome-looking weapons are swung in the one hand and raised from behind the shoulders forwards. There are rarely any fatal results unless the death of a man (for some crime or valid injury committed) has been determined upon. Barring this contingency, were a loss of life to take place the victim's mob would retaliate, run into the circle, pull out the individual who did it, and promptly make him pay the penalty. Of course minor wounds often occur: thus, on the Sunday previous to one of my visits five injuries took place by spear and boomerang—in the heel, thigh, one just above the hip (in a comparatively dangerous situation), one in the wrist of a gin (boomerang wound), and in the forearm. Women come into the circle and egg their husbands and relatives on: they bite their spears and sticks, strike and throw them on the ground, and will fight with members (female) of the opposite faction. They are using their tongues all the time and with far greater effect than the men. The din is something terrible while the tournament lasts.

Every ten minutes or quarter of an hour or so there is a rest, the spears and boomerangs may be collected and returned to their owners, the intervals, after once the *prun* has originally properly started, being of short duration. So again, if a person is badly injured, there is a short cessation of hostilities (while he is being carried off the ground to safe quarters), but only to be immediately resumed.

Fair play is certainly recognised in these encounters, and supposing only a few members of a mob turn up at the *prun*, and they are getting worsted by a stronger force, a third mob (even perhaps already at enmity with them) will come to the assistance of and join forces with the weaker.

Thus they go on fighting until dark, when more friendly relations are resumed, the *waru-waru* [sect. 26 (f)] and other corroborees are performed, and all goes well until the next morning, when, just as the sun rises, they have another final bout; and, as soon as the fighting is over, they all disperse to their respective homes. Evidently the *prun* both helps to settle old scores and at the same time promotes social intercourse and amusement.

I have had two opportunities of watching these *pruns*, one from the time it commenced until dark, and saw upwards of 200 savages congregated. On the second occasion, the Tully blacks had determined upon taking the life of one of the Clump Point boys, for the following reasons: On the previous Sunday's *prun* he had thrown a spear high up against a tree, whence it had glanced sharply downwards, imbedding itself in the neck of an old man (Tully native) with fatal results. The unfortunate thrower of the spear happened to be a "doctor," and nothing would satisfy the deceased's tribesmen but that it was some of his witchcraft which was responsible for the death. Mr. E. Brooke, who was with me at the time, did his best to explain that it was a pure accident, but it was no good. After taking sides the fight commenced amongst these excited savages, with the result that the doctor was ultimately speared (non-fatally) in the knee. I had watched this individual pretty carefully, and saw him ward off two other spears, aimed at his chest and lower trunk, when struck. As soon as he fell, his friends surrounded him, and with their big shields kept his aggressors at bay until he could be removed in safety.

to his own camp. Of course, any interference on our part was out of the question, it taking us all our time to get cover behind neighbouring trees out of the way of the spears and boomerangs. Everything, however, was amicably settled by nightfall, when all parties joined in the social which extended into the early hours.

16. Discriminative Games.—(a) *Hide and Seek* constitutes a series of very commonly played games, even by adults, that which is hidden being either a person or thing. In the former case, as practised in the N.W.-Central districts, there may be as many as three seekers in it, these covering their eyes with the hands, or putting their heads with eyes shut close to the ground, while the others hide themselves: if they cannot find those who are concealed, they often make a whistling sound as a sign of defeat. The Kokominni blacks call this game *paliwan*, but with them the object of the boy who hides is to get "home" if he can without being caught by the others who are looking for him. Where a thing is hidden, this is generally concealed in any small piece of level sandy ground, a circular space of from 1 to 2 feet in diameter being roughly marked out, and carefully smoothed over with the hand: the object of the players squatting or kneeling around is to try and find it. Correctly speaking, the hidden article is the lens, obtained after cooking, from the eye of a fish (Palmer R., Cairns, Pennefather R., Cape Bedford, Tully R.), opossum (Cairns, Boulia, and Rockhampton districts), rat or wallaby (Boulia D.): where these do not happen to be available, it may be substituted by a body-louse, small seed, or anything else differing from the constituents of the subjacent soil, so long as it is of comparatively minute size. At Marlborough I have seen the opossum lens rubbed between the hands to make it look a bit dirty, and so rendered more difficult to find. The actual method of hiding the lens varies slightly. On the Palmer it is held between the thumb and forefinger, the palm, turned upwards, being filled with sand: the latter, slipping between the interstices of the fingers, is jerked in all directions over the circular space, the lens being suddenly dropped during the course of the movement. The usual method elsewhere, however, is to pick up the lens together with a little sand, and thus drop it during the sprinkling, the palm being turned down. In the N.W.-Central districts, the object may be hidden in the sand while the players around, at a given signal, shut their eyes. To make a search, the players will pick up a pinch of sand at a time, and let it slowly sift through the fingers: the one who finds it is usually the one to hide it again. The game may be named after the local term signifying an eye, e.g., KAL *milti*, YID *chili*, KYI (C. Bd.) *mil dambanbar* (= eye to-throw); or it may have a special name applied, e.g. KMI *palagin*, NGG. *animo*.

Another hide-and-seek game played by the Kokominni boys is the *koabangan*. While all sit round in a circle with heads low and hands over their faces, an iguana-claw is hidden in the fork of a neighbouring tree: upon a signal being given, they will jump up and commence looking for it.

(b) The *Guess-Game* is another good pastime indulged in by young and old at Cape Bedford. One of the party may perhaps notice a new flower just in blossom, a bird half hidden in a bush, a tussock of grass uprooted, etc., and taking care to look in quite a contrary direction—indeed, anywhere but in the proper quarter—she will say, "What am I thinking of? *mim*!" They all try to guess, one after the other, and great laughter is aroused when the right thing is mentioned.

17. Disputative Games.—(a) It was during November, 1898, at a camp near the mouth of the Normanby—about 15 miles from the coast—that I first came across a *Wrestling* contest*, a form of amusement which I subsequently found to be apparently very common around this Princess Charlotte Bay district, in connection with certain of the initiation ceremonies, though it may be independent of them. Wrestling has since been met with on the Palmer (KMI, *donaman*), on the Pennefather (NGG, *arungga*), and at Cape Bedford. As originally observed, the combatants were all collected on a cleared circular space, about 8 yards in diameter—a disused initiation ground—where I watched them playing one morning for quite a couple of hours. Any individual who happens to pride himself on his skill in the game will open proceedings by challenging another, while the bystanders, egging them both on, and barracking for their respective favourites, will sing away and clap their hands in accompaniment. The wrestling itself takes place somewhat on the following lines. Bending forwards, the challenger will grip his adversary with both hands round the loins where he interlocks his fingers so as to maintain a very firm hold: the latter, with arms raised, remains passive, and in this position is lifted from off the ground on to which he is next thrown. Honours are divided so long as he touches ground with his feet, i.e., not thrown off his balance. The individual who is temporarily gripped may, however, steady himself with his arms on the other's shoulders, and usually prepares himself for a fall on his feet by keeping his lower limbs strongly flexed, thus rendering them springy on whichever side he may be thrown. There is no mutual clutching, or both combatants falling: strictly speaking, it is a throwing, rather than a wrestling, match. Only males engage in this sport: as soon as one proves himself victorious, another challenges him, and so on.

(b) A game, somewhat of the nature of a *tug-of-war*, is played by young and old men on the upper reaches of the Batavia River and at McDonnell (W. R. Webster). Instead of a rope, a pole some 12 to 15 feet in length is brought into requisition: in place of pulling, there is a pushing. Indeed, the fun consists mainly in balancing the pole *in statu quo* side against side for a few minutes, and then letting it fall with a deep grunt of relief.

18. Toys (Propulsive Games).—As already mentioned (sect. I.), all the toys or specially manufactured articles present the peculiarity that the source of the enjoyment consists in the particular form of motion which may be imparted to them. A ball, a top, or a boomerang—as such—constitutes no source of pleasure or enjoyment: but as soon as each of these toys is respectively thrown and caught, made to spin, or sent on its flight, the amusement and fun commences.

19. (Balls.)—(a) *Catch-ball*† in the N.W.-Central districts is played everywhere by both sexes, and either singly or with sides: in the latter case, the ball is thrown from the one to the other, the participants trying to intercept it while still off the ground. From the fact of the players jumping up to catch it resembling the movements of a kangaroo, the Kalkadun blacks sometimes describe this game as the "kangaroo-play." The ball itself is made of a piece of opossum, wallaby, or kangaroo hide, etc., tied up with twine.

*Wrestling: see Smith, *Aborigines of Vict.* 1878, I., pp. 177, 179, 180; and Bulmer, *Proc. R. Geogr. Soc. A. (Vict. Branch)*, V., p. 31.
†Ball: see Smyth, *op. cit.*, pp. 176, 178, 179, 180; and Howitt, *Journal Anthropol. Inst.* XVIII., 816, *foot-note*.

(b) *Bowl-ball* or *-disc*, a game the blacks appear very partial to on the Bloomfield, is played on a cleared space, about 12 to 15 yards long, down more or less of a slope. At the top end of this slope one of the men will, with his spear, start rolling a ball cut out from the top of a "zamia" (*Cycas*) tree: as it rolls on and on with ever-increasing momentum, his friends lining the cleared pathway will try and job it with their spears. The spears used for this special purpose are small, made in one piece, thrown with the hand, and known as *tchugari*. A similar sport is played by both old and young boys at Cooktown and Cape Bedford (Pl. XXXI.), where the ball is replaced by a disc, or rather by a horizontal slice cut from the soft stem of the cycad, the local name for the disc being *doba*. At Butcher's Hill and elsewhere the cycad disc may be replaced by a circular piece of bark.

(c) Corresponding to these variations of one and the same game on the eastern coast is that which I originally described as "*stick-and-stone*," practised in the Boulia district, where the Pitta-Pitta blacks speak of it as *pucho-pucho tau-i-malle* [*cf.* Kalkadun name *pucho-pucho*, signifying a spin-ball, and Pitta-Pitta name *tau-i-malle*, the reflexive form of the verb *tau-i-* to hit, or to strike]. It is played amongst the men, with from four to six individuals on each side, the two groups standing at a distance of from 15 to 20 yards apart: the members of each group, all armed with a stick, stand one behind the other, a space of 3 or 4 feet separating each. The game consists in alternately throwing a stone in the rough and of convenient size from one side to the other, each individual trying to intercept it with his stick as it skips or rolls before him on the ground.

(d) *Spin-ball* in the North-West-Central districts is a round ball of about 1 to 1½ inches in diameter, made of lime, ashes, sand, clay, and sometimes hair, rolled into shape, either between the hands or the folds of a blanket, and subsequently baked, thus making it smooth and hard: it may subsequently be painted with red or yellow ochre. The ball is spun by being pressed between the fore and middle fingers (Pl. XXXII., 1), upon either a patch of smooth hard ground, or more usually upon a flat board, sheet of kerosine tin, etc. Played by men and women, two or even three at a time: the one whose ball spins longest wins. The game can also be played by the participants taking sides, each backing individual members against its adversary's. It would appear to have been introduced into these parts from the lower Diamantina River, within but very recent years, coming up the Georgina *viâ* Bedouri: it did not seem to have reached, or been known to, the Cloncurry blacks in 1896. The ball is called *jillora* at Boulia, *popojo* at Glenormiston and Roxburgh, *pucho-pucho* in the Kalkadun country, and *anai-dappi-dappa* at Headingley and Lake Nash.

An undoubtedly indigenous form of spin-ball is, however, met with amongst the scrub-blacks of the lower Tully River, made out of a gourd (Pl. XXXII., 2). Two holes are drilled, on opposite sides of it, and through them an endless string is passed. A thumb is inserted at either end of the loop of string, and the "ball" rotated over and over. The hands are then more extended, and the doubled string untwirls the ball: the hands are again approximated with the ball twirling in a reverse direction: and so it may be kept spinning for a long time. This particular toy is played with more often by women than by men. It is known among the local Mallanpara blacks as *ngor-go*, after the name of the gourd.

20. (Tops.)—(a) *Spin-tops** are manufactured in the same and neighbouring districts, and from the identical gourd, by passing through it a stick which is fixed in position above and below with twine and bees'-wax. It is used only by the men, and spun by twirling with the flats of the open hands (Pl. XXXII., 3). A string is never used to spin it, while a hole in the side, to make it "hum," has only been introduced of late years. The local Tully River-name of this toy has already been given: at Cape Grafton it is called *bunbuja*.

(b) The *mamandur* of Cape Bedford is made by passing a small wooden splinter through a more or less flattened and circular plate of bees'-wax (Pl. XXXII., 4) and spinning it like an English boy would a "*tee-to-tum*"—*i.e.*, by a rolling movement between the middle-finger and thumb. Indeed, this method of spinning is adopted with the calyx-cups of the *Sonneratia acida*, Linn., the *Eucalyptus bicolor*, A. Cunn., and other plants.

21. (Sticks, etc.)—(a) *Shooting the grass-blade*, or rather its petiole, from the mouth is an amusement which I have seen indulged in along the entire eastern sea-board from Gladstone to the Peninsula. A piece of "bladey" grass (*e.g.*, *Imperata arundinacea*) is pulled, cut to a suitable length, and split from below up, on either side of the petiole, to a convenient length. Pl. XXXII., 5, 6, and 7, represent the three stages. As usually played, the cut extremity of the grass is held loosely and horizontally between the lips, while the split ends of the leaf are bent over a stick (grasped with the right) and held in the left hand (Pl. XXXII., 8). If the stick be now driven sharply forwards, the petiole is shot away, leaving the two halves of the blade behind in the left hand. Sometimes the stick is replaced by the fore-finger of the right hand: occasionally the position itself of the grass-blade is reversed, the split ends being held between the lips, and the cut extremity in the left hand. Boys, both old and young, are very expert with this toy in the way of killing such birds as small wrens, etc. On one occasion, at the Tully, I saw a boy shooting these grass-petioles at, and hitting, some weaver-birds' nests quite over 100 feet from the ground.

Another method of shooting wooden splinters is recorded from the Upper Normanby, in the middle eighties, and illustrated in Pl. XXXII., 9, 10, and 11. Mr. Robert Austen, the discoverer of the Kimberley (W.A.) Gold Fields, tells me that at Port Leschenhault, Koombana Bay (W.A.), in 1841-43, long before the advent of white settlement, this method of throwing the tips of the grass-tree leaves (about 3 inches long) proved a source of amusement for the girls and little boys who would send them sticking into the bodies of the blowflies.

(b) *Toy throwing-sticks* are met with throughout North-west Queensland, and are of two kinds. The one is a thin rounded straight stick, usually "*gidyea*" (*Acacia homalophylla*), with an elongately-knobbed extremity (Pl. XXXII., 12, 13), the whole varying from about 12 to 20 inches in length: it reminds one somewhat of a fighting or hunting "*nulla-nulla*" (but very much attenuated), the larger

* Spin-tops: see Etheridge, *Journ. Anthropol. Inst.*, 1896; Haddon, *Study of Man*, 1898, p. 255; N. Guinea, *Journ. Anthropol. Inst.*, XVII., p. 85.

varieties having even a similar name. At Boulia, Marion Downs, and Glenormiston the shorter variety is known as bum-bo, among the Kalkadun blacks as kum-po, and at Cloncurry as jim-ba-do: in the Boulia district the larger variety is called mur-ro, and in the Cloncurry minjo. Held at the thinner end, with the arm thrust well back from the shoulder, the smaller toy is thrown from a distance of 2 or 3 yards up and against the fringe of some overhanging bushes or leafy branches, or even against some thick foliage held up by a companion: immediately upon striking the obstacle so interposed, the stick shoots through the air, knob foremost, and with greater impetus to a distance quite half as much again than would otherwise be traversed. The larger toy is similarly employed, but is thrown downwards against a tussock or low-lying bush, whence it shoots along or close to the surface of the ground.

The second kind of toy throwing-stick is known in the Boulia and Cloncurry districts as kandi-kandi. It is thick and rounded, from 18 to 12 inches long, but strongly bent (Pl. XXXII., 14), approaching somewhat the shape of the Birdsville boomerang. On the other hand, unlike a boomerang, it is held on the *convex* side forwards, clasped firmly in the hand, and, simultaneously pressed close against the extended fore-finger, it is thrown downwards against a log or thick branch lying on the ground, from which it rises into the air in a straight direction and revolves in its flight.

22. While the fighting *Boomerang** may be employed as a toy, the implement is often constructed solely and especially for purposes of sport and amusement: no sufficient evidence is as yet available as to which particular use it was primitively applied. It is noteworthy that on the (middle) Palmer River, about latitude 16 degrees—the most northerly limit at which the boomerang has so far been met with—it is employed merely as a toy. The toy-boomerang is thrown only by men and boys, and its throwing is the only indigenous North Queensland game wherein any real attempt is made to see who is the "best" man so to speak, but even then no so-called "prize" is awarded: indeed, it is apparently very difficult for these blacks to understand the more civilised custom of producing emulation by a system of awards. There are two methods of throwing the implement: direct into the air (common everywhere) or straight onto the ground (Cairns and Cardwell coastal districts). The boomerang is said to be right or left handed not because it is necessarily thrown with the one or other hand, but because it circles to the right or left side of the thrower. Until its manufacture is completed, and it has been tried by experience, the blacks have told me that they cannot determine with any degree of assurance which of the two varieties it will prove to be. When thus made as a toy, and compared with a fighting boomerang, it is lighter and smaller. It varies in shape from a comparatively strong angle (Pl. XXXII., 15) to something approaching a half-moon; the knee or bend is approximately in the centre, and so divides the implement into two halves, the planes of which show indications of both flexion and torsion. Sometimes, the toy article is cut down from a fighting boomerang that has been chipped or otherwise damaged. In the N.W. Central districts, if coloured at all, it is smeared with charcoal: here, also, it may often be ornamented, but there is no rule or uniformity in the gravings, of which some of the designs may be very quaint. It is never used as a recognised article of exchange or barter: that is to say, it does not travel, but is manufactured just as occasion requires.

When thrown into the air, with the concave edge of course forwards, its usual flight is represented in Pl. XXXII., 16, 17, with a right and left handed boomerang respectively, where the line A represents the direction faced by the player. The object of the game varies in different districts. On the Tully River, the best player is the one who can make the boomerang finally reach the ground nearest to him. A good thrower here can hold a spear vertically, and thus catch the implement as it passes on its final flight, making it pass spirally down the spear so as to fall into his hand. The Cloncurry blacks will fix a peg into the ground, and the one who can strike or come nearest to it with the boomerang when it falls is declared the best man. In the Boulia district†, where they can throw a figure-of-eight (Plate XXXII., 22) five, six, or perhaps more men will stand in Indian file, each individual, with raised arms, resting his hands on the shoulders of the one in front: another of the playmates, standing by himself at some distance ahead, and facing the foremost of the file, throws the boomerang over their heads, and as it circles round they all follow it in its gyrations, the game being for any of them to escape being hit, each taking it in turn to throw the missile. Among the Yaro-inga tribe on the Upper Georgina, the blacks often try and arrange to make up two sides, the idea being for a member of the one team to hit an individual of the other.

If the toy-boomerang be thrown direct onto the ground and slightly to the right or left (never exactly straight ahead), the course of flight is represented in Pl. XXXII., 18, where B indicates the spot struck: R represents that of a right-handed and L that of a left-handed instrument, A having a similar signification as before.

23. The "*Cross*" is made of two pointed laths, from about 8 to 10 or more inches long, drilled at their centres and fixed cross-wise in position with split lawyer-cane (Pl. XXXII., 19). It is met with in the coastal districts extending from Cardwell to the Mossman, and to the Mallanpara blacks of the Tully is known as pirbu-pirbu. Like the toy-boomerang it is used by men and boys only, and thrown according to two methods. In the first, thrown direct into the air, the course of flight is similar to the boomerang, but there is more of the circle than the oval, and a *double* circle round the player at its termination. If thrown onto the ground, it is made to strike a spot directly in front of the performer (Pl. XXXII., 20, B), whence it curves to the right or to the left as the case may be.

The above toy is imitated by some of the smaller children by means of thick swamp grass, etc. The two strips are either pierced and tied as in the case of the wooden ones, or else plaited together as shown in Pl. XXXII., 21. It is thrown with a twist of the wrist up into the air, whence it soon returns in a right or left spiral.

24. *Pit-throwing* is a game played by the Kalkadun. Any fairly-sized bone, often a human shin, is slung by means of an attached twine over an emu net into a pit or hole excavated on its further side. Considering the great distance often intervening between the thrower and the excavation, great skill is apparently necessary in making the bone fall into the hole without touching the net.

* Toy Boomerangs: see Bennett, *Gatherings of a Naturalist*, p. 290.
† See Roth, *Ethnological Studies*, p. 128.

25. Music (Exultative Games). Songs.—Notwithstanding the important rôle which Song plays in the life-history of the aboriginal, any inquiry into its origin and aims is at the very outset obstructed by the scanty knowledge which any reliable observer can possibly possess of the native dialect in which it is given expression to. During the course of my peregrinations in North Queensland during the past eight or nine years, I have, for instance, met only with four, or at the most, five individuals having such an accurate knowledge of the language, that their translations could be absolutely depended upon. But even such knowledge has, in a sense, its disadvantages for the reason that its very fulfilment entails intimate relationship between the white and the black for a period of at least many years during which the personal influence of the more civilised individual undoubtedly exercises important changes in his more unsophisticated friend's thoughts, customs, and general social system, these in the meantime becoming gradually covered with European veneer. The following notes are based upon some scores of songs which I have heard in the N.W.-Central districts, in the Peninsula, and along portions of the eastern sea-board (especially among the Tully River scrubs where I had exceptional opportunities of obtaining reliable information): *i.e.*, for the most part, in those areas where the aboriginals have, comparatively speaking, been least contaminated by civilising influences.

Anybody may "find" or compose a song, adaptable to his or her respective sex, and when pressed for further information will often make the allegation that it came into being in the course of a dream: an idea prevalent both on the western border and eastern coast-line. Accompanying decorations or dances, if any, may also be explained on the same basis. Each song consists of the chanting of some short sentence or sentences repeated *ad libitum*: during the utterance of the last two or three words the singer may be accompanied vocally by the others, thus giving rise to the opinion, often expressed, of the existence of a distinct and separate chorus. It but very rarely happens that a native will sing without a listener. In the actual wording of the Pitta-Pitta songs of Boulia there are undoubtedly variations from the ordinary every-day colloquial language in pronunciation, inflexion, pleonasm, and ellipsis which may perhaps be regarded in the light of poetical or musical license. For instance:—

Molloro-ena	parkula	nangkai-a, <i>i.e.</i>
Mountain alongside of	two (people)	sit

becomes Molloro-chi-ena poraki nangki. In the same way,

Kuta	nanyati	mankarinni, <i>i.e.</i>
Water-hole	belonging to me	(is) clean

becomes Kota ninya, etc. Again, in several of the Tully River songs, many words occur which are not used in ordinary conversation—they may sometimes even have no intelligible meaning—thus rendering an absolutely literal translation impossible. A word may even have a different meaning, according as it is used in prose or poetry: *e.g.*, pandun (MAL) signifies "to freckle" in ordinary conversation, but "to kill" in song. The extreme is met with in those cases where the songs are taught and conveyed long distances from one tribe to the other, for, like articles of exchange and barter, they may travel in various directions and along identical trade routes and markets. As has been already recorded by me in the N.W.-Central districts, when taught to one tribe, the latter may take the song on to the next, and so on, the visitors being given presents, etc., in return for the instruction imparted. Sometimes picked men may be sent long distances just for the sake of learning one. It may thus come to pass, and very often does, that a tribe will learn by rote and sing whole songs in a language absolutely remote from its own, and not one word of which they—the audience or performers—can understand the meaning of. That the words are very carefully committed to memory, I have obtained ample proof by transcribing phonetically the same songs as performed by different-speaking people living at distances upwards of 100 miles apart; as for instance in the case of the Molonga performances, which also afford a good illustration of the distance and time taken by a song (with its accompanying dance) in the course of its peregrination. Whether the Workai-a (Professor Spencer's Waakia tribe of Central Australia) of the Georgina head-waters and Northern Territory invented it themselves or received it from others, it is impossible for me to say: nevertheless, from them it travelled to Camooweal and Lake Nash, whence the Headingley (Yaro-inga, etc.) men brought it to Carandotta, whence it made its first appearance in 1893. Hence, it branched along in three directions: westwards to the Toko Ranges, to Carlo, and down the Mulligan: eastwards, to the Selwyn, etc., Ranges, and to Mount Merlin, Buckingham Downs, and Cloncurry: southwards, to Roxburgh and Glenormiston, at both of which localities it appeared at the end of 1894, and so to Herbert Downs and Boulia where it arrived in 1895. From Boulia it travelled on the one hand, *via* Marion Downs, down the Georgina, making for the Lower Diamantina, and on the other *via* Springvale for the Gates, Davenport, and Cork on the middle Diamantina where it was met with at the beginning of 1896. Even at Roxburgh all traces of the meanings of the words had been lost by, or rather were unintelligible to, the individuals singing it.

On the other hand there is occasionally undoubted evidence—*e.g.*, on the Tully—that the same song may be found in the camp for years without apparent alterations. The first word or line of the verse often gives the name to the particular song, in the same way as a European speaks of his Pater-noster and Alphabet.

26. (Songs.)—The subject-matter expressed in song deals with obscenity, pure and simple: persons deceased: provocations for quarrels: animal life: everyday experiences of personal or tribal interest: and ceremonial observances. As far as is ascertainable, there is no single touch of sympathy, sentiment, or pathos—no lullabies or love songs in the modern sense of these terms.

(a) *Obscenity, pure and simple.*—These are sung for amusement only, refer to women, and are considered the best. The ideas of most of them are absolutely filthy, and the more "smut" a man can thus compose the smarter and cleverer is he reckoned among his people. Though sung in the presence of both sexes, only a few of the women are to be found who will join in them; and here it may be noted as an interesting psychological fact that a female will rarely, if ever, sing anything correspondingly filthy

concerning men. Such songs are known to the Mallanpara blacks of the (lower) Tully River as "maraga," though the word itself has no apparent English translation: the following will give a good idea of their nature in this district:—

• Ngollo chungkan-chungkan mangka ballabaji. Wangkuru kulgoma =
Female-parts (no intelligible meaning) to pick up there. Edge of a fire to heap up.

In a latin translation this would be: "Collige cunnos istos. Cumulaque in ignem."

Bungun kabi-kabi. Ulnkumpuaringo kandemaringo gobi. Kopu kabi-kabi =
vulva, etc. to fan. to have sores hot very. leaf to fan.

Kabi-kabi punjo =
To fan to strike (with a leaf).

i.e., in latin: "Auras collige flabello ut frigescat cunnus illius. Ulcera habet ardentia. Collige auras folio. Perge foliis colligere auras."

Miti-miti chungguru mono churmali, kunyungaro buninachuerin. Pi-irmbin-irmbin =
Little hard buttocks to squeeze, to look at to light (a fire) Mons veneris.

i.e., in latin: "Comprime cluniculos puellæ illius tam duos, quos vidi dum proclinatur incenditque ignem. Vidi usque ad montem veneris."

(b) *Persons deceased*.—These "wata" songs of the Mallanpara, but no translation of the term is forthcoming, are only sung some time subsequently to—never at—a burial or cremation. Thus I have seen two or three men and women singing over the skull and other bones resting on one of their laps or on the ground, and in response to inquiry have learnt that the skeletal remains may thus be carried about for many months, for this especial purpose only, before being finally disposed of. A different song is composed on each occasion, its exact nature depending upon the character of the person deceased, the presumed cause of death, etc. On the lower Tully, wata-songs are sung to the memory of males only: on the upper portions of the same river, both sexes are similarly honoured. In view of the conditions under which they are sung, at any and every social gathering, etc., their existence is accordingly made mention of here in preference to postponing them for discussion under matters connected with burial and mourning ceremonies.

The following concerns a widower who met his death as the result of being speared in the knee:—

Barkun kuya ngoko. Barberi-go ngoko. Barberi. Kitchir-kitchir Kitchir-kitchir-go =
Him other side dead person. Wife. dead person. Wife. Painted (in spots) painted (in spots).

Bungko. Barberi=
Knee. Wife.

In vernacular English this would be somewhat expressed as:—"The departed one on the other side (of the Tully River). His wife is dead. Alas! she also. (She was once) painted and decorated (when a former husband of hers died. Our friend was speared in) the knee. His wife (is also dead)."

Here is another, referring to a young man, not native of the place, who died on the lower Tully, and whose body, for sanitary reasons, my friend Mr. Brooke had ordered them to cremate at once without any ceremonial. It was thus that the local blacks were never satisfied as to the cause of death, but in order to prevent themselves dying from a similar cause—whatever it might be—they used to sing this:—

Mando pandun pandun. Kumbo wirban =
Here to kill to kill. Place another.

Yangko pandun-man. Killangojo? we-aman? =
This to kill. What? which way?

Yallikalli minchanmi kunbanmi. Bai-ingaro puroman =
In yonder direction well to cut. In opposite direction none.

Its free translation would be:—"This (country) made him die. The place he did not belong to [*i.e.*, another, foreign to him]. It was this (that made him) die. How ever (did it happen)? In yonder direction he cut (the timber) well. In the opposite direction (there remained) none at all." [N.B.—The last two lines refer to the fact that the deceased worked well for his employer in felling trees.]

(c) *Provocations to Quarrels*.—The Mallanpara call the next series of songs "chapura-pai-a," chapura signifying a man who steals a gin, and who thus renders himself liable to punishment. The verses generally concern the particular woman fancied, etc., by the person taunted, and are sung purposely by a man at another in order to provoke a quarrel, and so give pretext for a fight with him at the next Prun (*i.e.*, regularly-fixed fighting tournament). On other occasions a man may be taunted concerning real or imaginary peculiarities concerning his person. So also one woman may exasperate another by singing some filth at her—no men of course being present. Such songs serve a distinct purpose, and it is only on rare occasions that they are given at an evening social for pure amusement. Examples of them are the following:—

Chopul ballabaji bungkingo. Bakul-baji bakul. Obarongo gobi-chopul. Pulunggo =
Mentula there to lie down. There it. Large very. Anxious.

i.e., in latin: "Aspice hominem illic recubantem, aspice mentulam: quam rigida, quam longa, quam ardens."

Nyamura-go kunda. Chanja ballan ngino Ngajolma ngarima =
To place behind to put. Now she yours. Out-of-sight to copulate.

i.e., in latin: "Colloca post te puellam. Nunc tua est. Apage in secretum, futue."

The next example requires a little preparatory explanation. It was originally sung by the lower Tully River natives at the coastal ones (nearly all dead now), who especially appear to have suffered from enlarged testicles (elephantiasis, venereal, etc.): Manda is the term applied to a woman afflicted with enlargement of certain portions of the privates, a deformity which is far from rare in this district: Bulkuru are the edible tubers of the *Heliocharis sphacelata* found growing in the swamps.

	Wachilmango	manda	bulkuru	barkumkalla	ngino =	
	To promise	a deformity, etc.	nut	inside	yours	
Kiwal	nyamulgo	bulkuru	wachilmango	ngino,	barkumkalla	ngino =
Testicle	big	nut	to promise	yours,	inside	yours.

i.e., in latin: "Hem! promitto tibi magnum cunnum nucibus istis, magnis istis testibus, quos intus habes."

The last example I propose giving relative to this particular series is one that was sung, out of jealousy, by one woman at another: both of them were the wives of the same spouse who happened to be away at the time:—

Putu	jural	minya	balla	bangun?	
Scar	pubic hair	what	that	hers?	
Kinni	puta	puta.	Minya	balla	bangun?
Groin	scar	scar.	What	that	hers?

i.e. in latin: "Quæ sunt ulcera ista in pudendis huius feminæ? Ecce cicatrices in inguine. Unde facta sunt?"

It is not to be wondered at that a taunt such as this should start a fight.

(d) *Animal Life*.—The Mallanpara express all these songs collectively as kokolo, naming them after the sounding sticks [sect. 29 (f)] which in that particular district especially accompany them, and which are made to beat time with the antics of the various birds, quadrupeds, etc., represented. Certainly on the eastern sea-board, and in the Peninsula, many of these songs (with their special dances) are originally taught to the novitiates as part and parcel of their initiation ceremonies, whence females are excluded, although some may be performed in the presence of both sexes at an ordinary social gathering. Pl. XXXIII. represents a crocodile-performance (taught originally at the initiation ceremonies) from the Pennefather River: Pl. XXXIV. shows a better view of one of the head-dresses.

(e) *Matters of Daily Routine*.—These include songs dealing with subjects ranging, for instance, from the climbing of a tree after honey to the rescue of a drowning man in flood time. Examples of some of the simpler Pitta-Pitta ones in the Boulia district are—

Worpilla-ng	ninya	kunamalyaro	yakka-yakkangi.	Yirta-yirta	iriticha =
Hook-boomerang	of mine	mud	digs up.	Grass-tops (make a)	bough shed.

Many of the more complicated ones are recitative of events, more or less known to all, that have actually occurred. These are usually accompanied by full histrionic action and accoutrements.

(f) *Ceremonial*.—This category would include the songs peculiar to the different initiation, burial, and other ceremonies as well as those used for purposes of witchcraft, sorcery, rain-making, etc. With one exception these will be further discussed in future bulletins in connection with their respective subject-matters. The exception consists of a series of songs, etc., which are at the present day met with in conjunction with three social events, but apparently all traces are lost as to why and with which—one, both, or all three—it was originally associated. Met with on the Tully and neighbourhood, where they are called the "waru-waru," they consist of all kinds of excessively filthy songs sung only at the fighting tournaments (Prun), on the deaths of certain people, and in connection with newly married men. Waru-waru is a word hardly translatable into English: the nearest vernacular approach would be "acting the goat," with an expletive between the second and third words. While the songs are in progress, one, two, or more men—any that like—will take into their mouths, chew, and spit out again, the leaves of the "stinging-tree" (*Laportea* sp.) What with the pain and irritation so produced, such an individual is speedily roused into a state bordering on frenzy, when he will commence eating the human excreta prepared for the purpose, will both act and give expression to anything foul and bestial he can think of, do his best to insult everybody present, start chasing the women, and, rushing headlong hither and thither, will finally fall to the ground completely exhausted and collapsed. The mental and physical strain to which the person is thus subjected may be gauged from the fact that it requires some few weeks before he is sufficiently recovered to resume his ordinary routine of daily duties. The excreta referred to are partaken of either in the solid or with water, previously mixed: in the latter case they may in addition be smeared ring-fashion round the neck and chest of any newly-married man happening to be present, and who, presumably on the chance of objecting, is firmly held down by others during the process.

I have not been able to decipher the harmony of the music: to my unmusical ear it always seems identical—a sort of drone commencing with a sudden rise, and ending with a slow prolonged fall.*

27. (Dances).—People always sing in one or other of the squatting positions, and beat time either with the hands or with sticks, etc. Whereas songs may or may not be accompanied with dances, there is never a dance without a song: in other words, dancing is essentially the accompaniment of song. Furthermore, beyond an occasional shout or whoop, the dancers certainly, while dancing, do not participate in the singing. With the males the dancing consists, in the main, of a stamping movement of the feet to the time beaten on the hands or on sticks (Pl. XXXV.) Another

* Song in corroboree at Lake Tyers, Gippsland, see Smyth, *Ab. of Vict.*, I., p. 170: Earthquake Song of Yarra Yarra tribe, V., see *Ibid.*, II., p. iii.: Air of Song at Swan River, W.A., see *Ibid.*, II., p. 266.

fairly common movement of the lower extremities is the alternate external and internal rotation of the knees with the limbs separated (Pl. XXXVI.) Occasionally, one foot may be placed over the opposite knee (in the position of rest) and a hopping step introduced. The various positions assumed by the arms and hands vary in great measure with the different implements that may be brought into requisition: sometimes the ground is struck with the flats of the hands. With the females, the movements of the lower limbs also present great variety: usually a jerky movement, with rarely a separation of the legs. The arms, unless otherwise employed with a string or other ornament, are commonly maintained in such a manner that the hands rest on the hips, while the elbows, sticking out at the sides, are rhythmically drawn backwards and forwards. Sometimes a finger is put in the mouth, a typical position on the lower Tully River (Pl. XXXVII.) In many dances the women never turn their backs on the audience, even when retiring to their places. The dancing is always individual—nothing in the shape of couples, etc.—notwithstanding the many variations in initial position: *e.g.*, square formation, Indian file. In the N.W.-Central districts the dancers are invariably led by one or sometimes two “masters of ceremonies,” or “leaders,” who may be distinguished occasionally by an extra feather-tuft on the arm, etc.: the Pitta-Pitta blacks speak of such a leader as the father, or “old man,” the remaining dancers being the “children.”

28. (Entertainments.)—The “corrobboree,” so named by Europeans up here in the North, comprises any ordinary “social and concert,” generally, but not necessarily accompanied with a dance: an entertainment by the tribe in general. On the lower Tully, the Mallanpara call both social and dance origo: the Boulia (Pitta-Pitta) natives speak of the social itself, the singing, and the dancing as wanni, wanka, and ichalamalle respectively.

The true social commences at sunset, and may be continued late into the night, even until sunrise; and, if some special performance is being enacted, may be resumed for three, four, or even five nights consecutively. Fires supply the illumination. Of course there are exceptions to this rule of always having their socials at night, but when held in the afternoon are rather for those wherein the women would take a greater share in the performance, and the men, if present at all, far less trouble in their decorations. In a certain sense, “afternoon teas” and “evening parties” would give an idea of their relative importance. Corrobborees, however, have this peculiarity: that all persons present are simultaneously audience, performers, and orchestra: visitors may of course be present as spectators, but usually only when ignorance prevents them being participants. In some of these entertainments there may be no personal decorations at all, the performance consisting of a song and plain dance: but if any decorations at all they would be on the dancers.

Other corrobborees may each have their own particular decoration: thus, as on the Tully, when the programme consists of dances pertaining to and imitative of the different animals—*e.g.*, flying-fox, cockatoo—portions of these animals, especially the heads, are utilised for purposes of ornament. I have not heard of any cases where men act the part of women, or *vice versa*. The corrobboree is always held at some distance from the main camp, and the same ground, cleared of bushes, etc., may be thus utilised for months at a time. On the lower Tully there is no adjoining bough-shelter in which the performers can or do prepare themselves for the slight ornamentation which they sometimes aspire to. Among the N.W.-Central tribes the sexes, in certain corrobborees, decorate themselves in separate localities, the one not being allowed to watch the other: furthermore, no individual is permitted to watch the “dressing” of either, unless he or she shall have previously witnessed that same performance. When, however, the respective toilettes are completed, the performers will betake themselves to what may be considered the “green-room”—at all events, what would correspond to it among more civilised communities—whence they emerge or whither they retreat, according as their presence is required or not during the course of the performance. In the Boulia district this green-room consists of a sort of bough-shed formed of long saplings placed slantingly so as to rest upon each other at their apices: it is known to the Pitta-Pitta as the dakka-dakka, and to the Maitakudi as jilbi.

The following corrobboree custom is reported from Pine Mountain, etc. (East Coast):—The corrobboree-ground, cleared entirely of grass and sticks, is made about 25 yards long and 6 yards wide: its far end is called Runkah, its near end Buta. Each blackfellow in turn stands a few yards beyond Buta with only a throwing nulla in one hand, the other being held open behind him. He then throws the nulla into the clearing, at the same time calling out the name of his country: thus, a Pine Mountain boy would say, “Yaamba ichon Kunyan” (Kunyan is my country), and there he stands a minute or so, while any of his friends may put a present of a spear, boomerang, or other weapon into his hand. A good fighting man may thus receive more than his hand will hold—particularly if he has young daughters. Then another man takes his place, and throws his nulla, giving the name of his country, etc. (W. H. Flowers.)

29. (Musical Instruments.)—(a) The *yiki-yiki** (the second *y* being scarcely sounded) is a wind instrument met with in the area included by Cooktown, Laura, Palmerville, Maytown, Byerston, the Bloomfield, Daintree, and Cape Grafton, and known by the same name. From what Mr. R. Hislop tells me, it is said to have been introduced onto the Bloomfield from the Gulf country through the Kokowarra-speaking blacks, *via* the Laura, long before the oldest living aboriginal at Wyalla (Bloomfield) was born, and that from here the Daintree blacks got their first instrument. The *yiki-yikis* in use on the Bloomfield are simply hollow hardwood saplings, about from 7 to 9 feet long, which taper from 3½ or even 4 inches at the larger distal extremity to about 2 or 2½ inches at the smaller proximal (mouth) end. The sap-wood is generally cut off, leaving a shell ¼ to ½ inch thick, but the only polish it gets is the constant handling. The blacks never go to the trouble of charring out a sapling, as they can get plenty of hollow ones: neither are they particular as to straightness, for the reason that the ones which are naturally hollow are usually straight. Before iron tomahawks were available they used to take great care of the *yiki-yikis*, but as they are easily made now, and are a great nuisance to carry about when shifting camp to any distance, they are generally left behind, and so get burnt by the first bush fire that comes along. Hence no extremely old ones are usually obtainable. Of course after they have been in use for several years they look as if they had been polished owing to the amount of grease absorbed in

* So-called “Trumpet”: see Etheridge, *Macleay Memorial Vol.* (Linn. Soc. N.S. Wales)

the constant handling. Another cause of the instrument being cut off in its prime is that at times the younger boys will keep up the performance at all hours during the day or night until some exasperated individual gets thoroughly sick of the sound and smashes the instrument. The blacks may then not take the trouble to make another for a year or so. When the musician desires to perform he supports the larger end on a forked stick or on the roof of his hut, and, applying his mouth to the smaller end, intones into it for hours at a stretch. The use of this instrument on the Bloomfield, like the "bull-roarer," is taught at the initiation ceremony, but, unlike the latter, it can be played in the camp before the gins and uninitiated males. It is never employed in this locality for imitating the call of the cassowary (*cf.*, the "emu-calls" of the Gulf country), though, curious to say, the blacks have a legend that it was (and still may be) used by certain spirits for that very purpose, long before they themselves knew how to use it.

(b) Other wind instruments are the *hollow bones* (Normanton, Cape Grafton, etc.) and *hollow reeds* (Tully River) with ends cut off abrupt, and blown across their tops—something after the manner of the units composing a pan-pipes. Strange to say, this instrument at Cape Grafton is also spoken of as *yiki-yiki*.

(c) At Atherton I have seen young boys produce a sweet whistling sound by means of a leaf-blade—a *leaf whistle*. This was gently folded along its midrib, the free edges of the two halves held between the protruded lips, and the sound produced, not by expiration, but by inspiration. Whistling *per se* is not practised by the wild blacks—indeed with those individuals on whom avulsion of the incisor teeth has been practised it is a physical impossibility. On the Bloomfield and elsewhere whistling is considered the language of certain evil spirits.

(d) Discharge of *flatus per anum* on the Tully River is, under certain circumstances, considered an amusement amongst the men. They will do this regularly to time as the women hammer certain of the food-stuffs on the pounding-stones. In justice, however, to the opposite sex it is only fair to state that were the women to indulge in similar practice it would be regarded in the light of a disgrace.

(e) *Hand-clapping*.—Especially in the Peninsula, where there are no boomerangs, sounding-sticks, etc., both men and women will clap their hands with open or bent palms, and so produce variations of sound depending upon their degree of concavity.

A very common practice throughout North Queensland is for the women to hit their inner thighs with the flats of the hand. Pl. XXVIII., taken from two Princess Charlotte Bay women, will assist in forming an idea of the posture assumed in such cases. Occasionally (Cardwell, etc.), the outer sides of the thighs may be smacked for similar purposes. Among the Kalkadun and Maitakudi tribes, the women, instead of striking their thighs, occasionally employ a sort of drum or small *pillow* made of opossum skin, etc., filled with feathers, rags, etc., upon which they will bang with the flats of the open hands. Such a pillow is known as the *pikabara* in the Maitakudi language.*

(f) *Sounding-sticks* are met with in the hinterland and coast line, extending from about the Daintree to the Herbert Rivers—and perhaps a little further south. Both at Cairns and among the scrub blacks along the Tully River, they are known as *kokolo*. In the latter district they are made of *Hibiscus tiliaceus* timber. They are often hardened with fire at their extremities, and usually of unequal size, the larger being held loosely, and more or less downward (Pl. XXXIX., 1, 2, 3), and sharply tapped with the smaller one. To produce a deeper sound, the distal extremity of the stick struck is made to rest on the foot, heel, etc., according to the particular squatting position in which the performer may happen to be.

In those districts, *e.g.*, the Western, where boomerangs are in use, these may take the place of sounding-sticks. With their concavities turned towards each other, a weapon is held at its middle in either hand, and the tips of each struck together on the flat. If sounding-sticks or boomerangs do not happen to be handy, etc., the spurs or buttresses of certain trees, *e.g.*, figs, conveniently situated, may be hammered with sticks in the rough (in the Cardwell scrubs).

During the course of an initiation ceremony at the back of Pr. Charlotte Bay in 1898, I saw five or six individuals with sticks hammering away upon the convexity of a hollow log, split in half, with the concavity turned downwards: it acted much like a sounding-board, and a splendid-tone reverberation was the result.

(g) *Rattles*,† for the children, met with on the Pennefather River, are made by stringing together particular shells and tying the ends: the shells so utilised are the *Cypræa subviridis*, Reeve., *Arca pilula*, Reeve., and *Strombus Campbelli*, Gray.

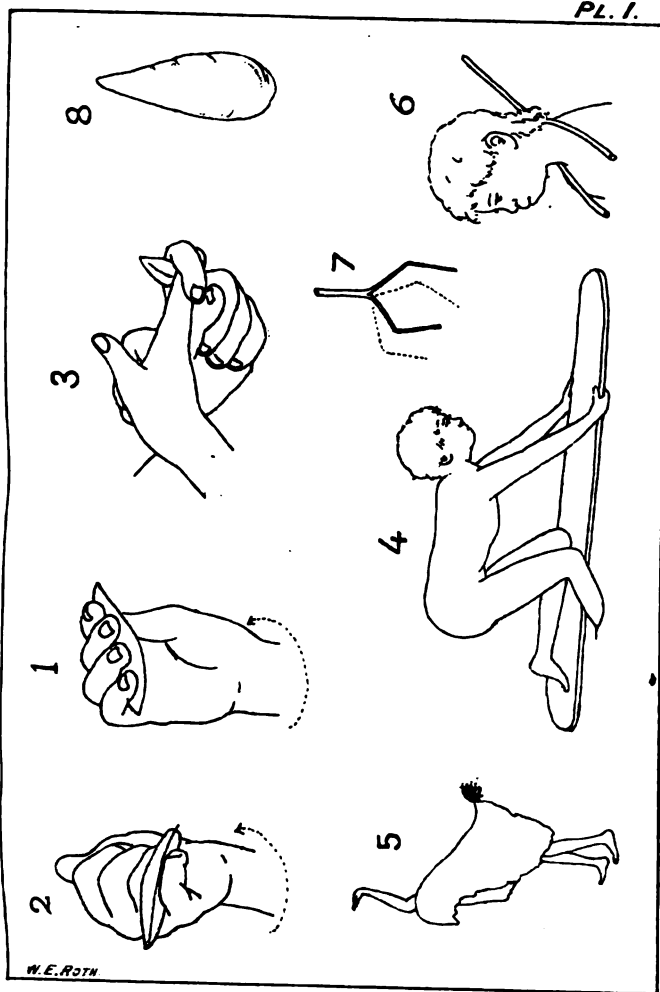
Serving a purpose similar to *castanets* are the bunches of singed, heated, or otherwise dried leaves attached to the shins, or shaken in the hands, of the dancers out in the N.W.-Central districts.

30. Introduced Games.—There are a few games which have been introduced of late years amongst the natives through the agency of the missionaries, settlers, and others. Amongst such may be mentioned marbles, running races, high-jumping, throwing spears through a suspended hoop, the use of the skipping-rope, etc.

* Rug "drum" in W. A.: see Ogle, *Colony of W. A.*, 1839, p. 61.

† Shell Rattle (beyond Cairns, inland): see Etheridge, *Journ. Anthropol. Inst.*, 1894, XXIII., p. 320.

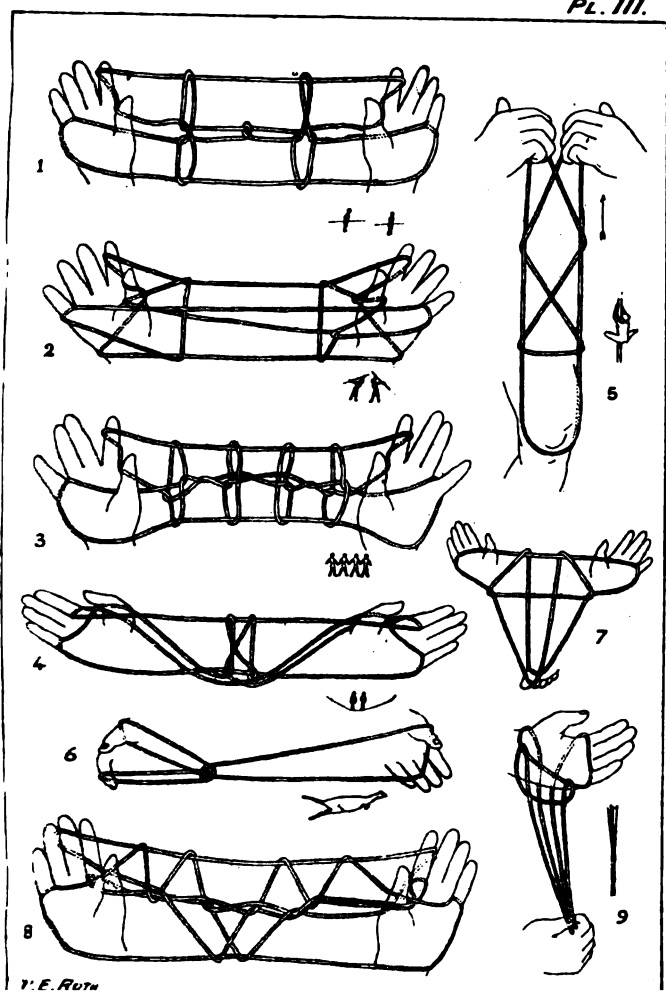
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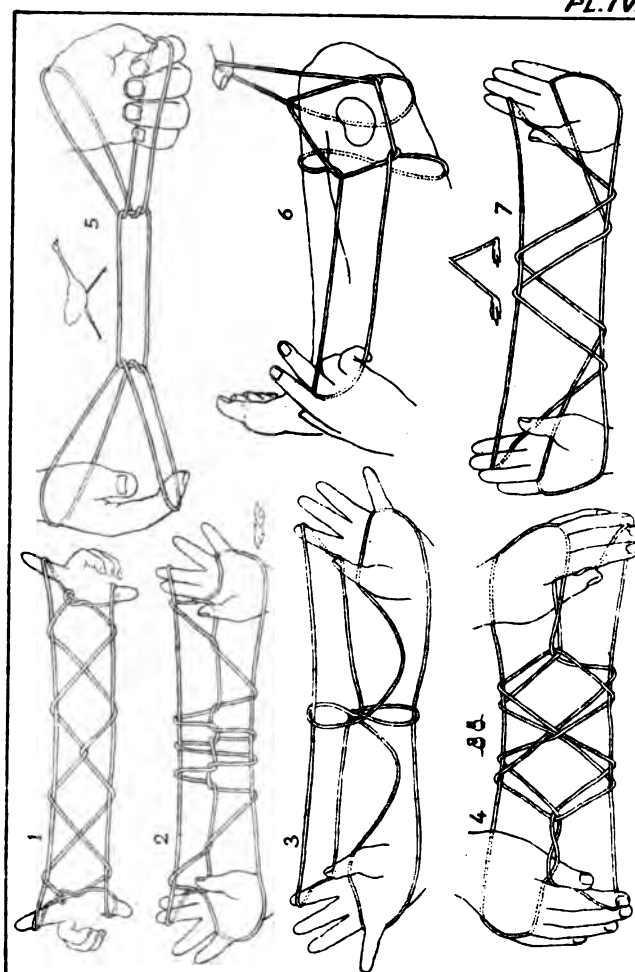
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PL. III.

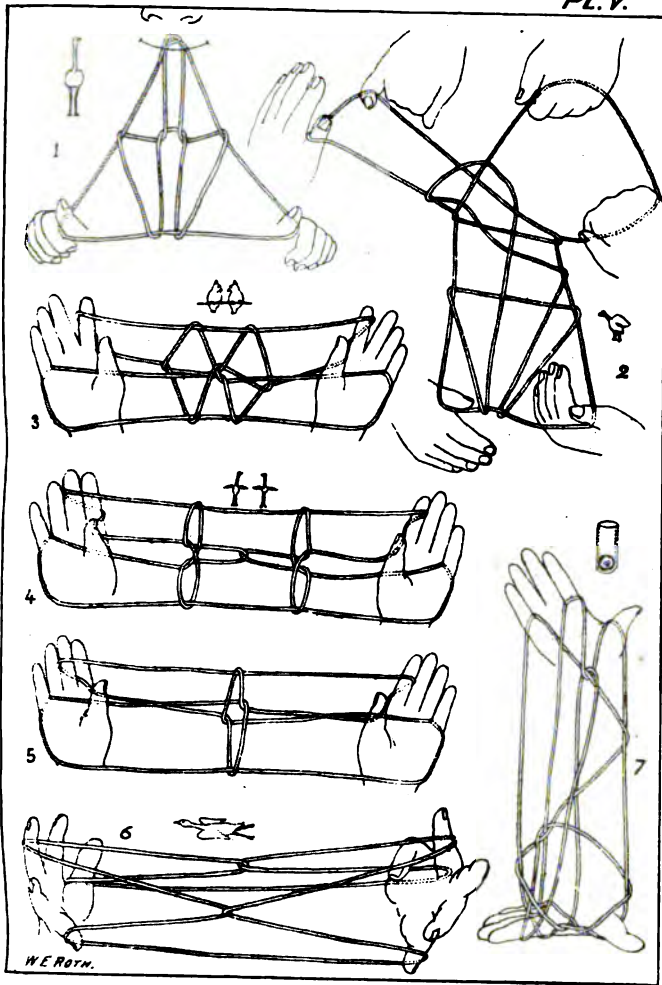


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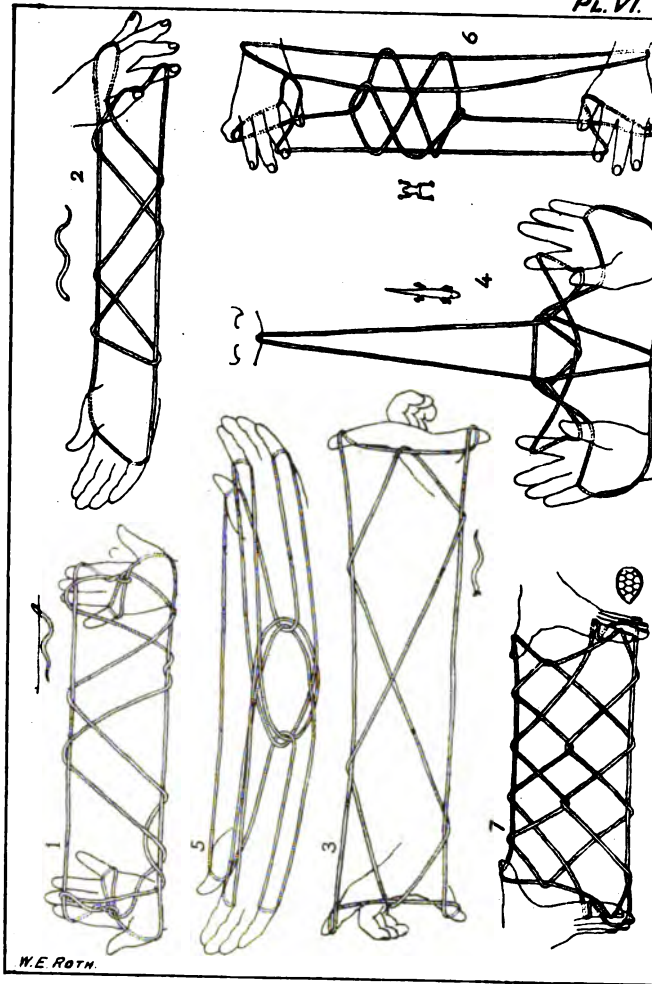


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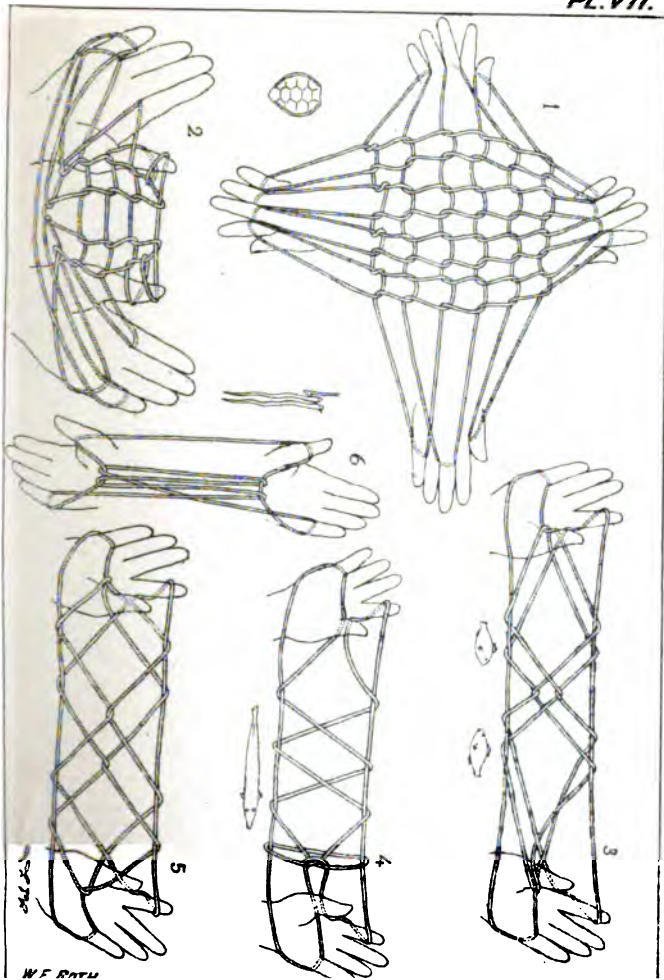
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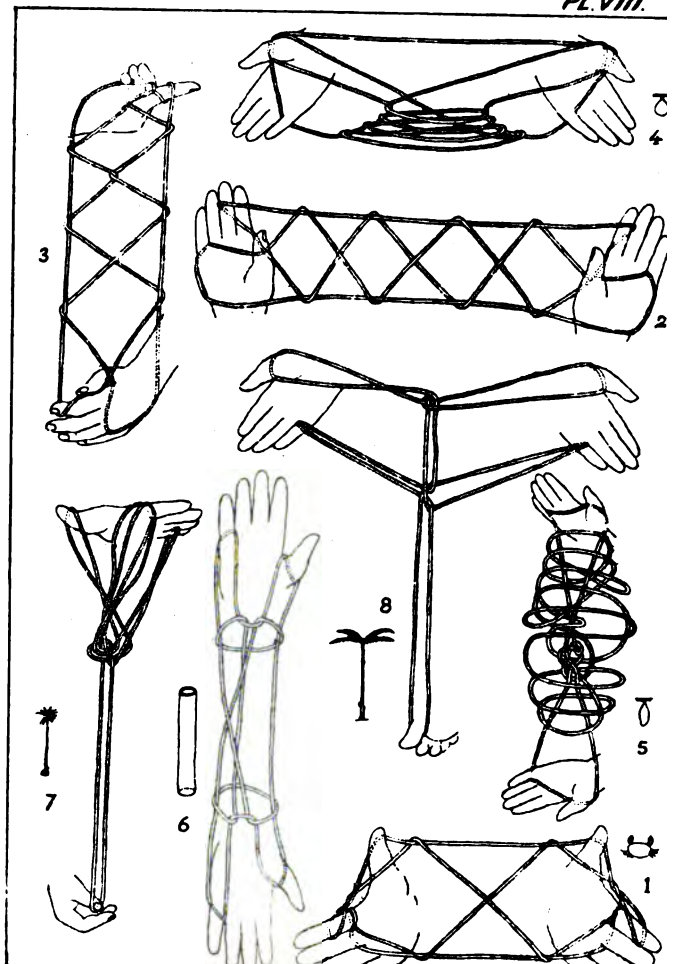
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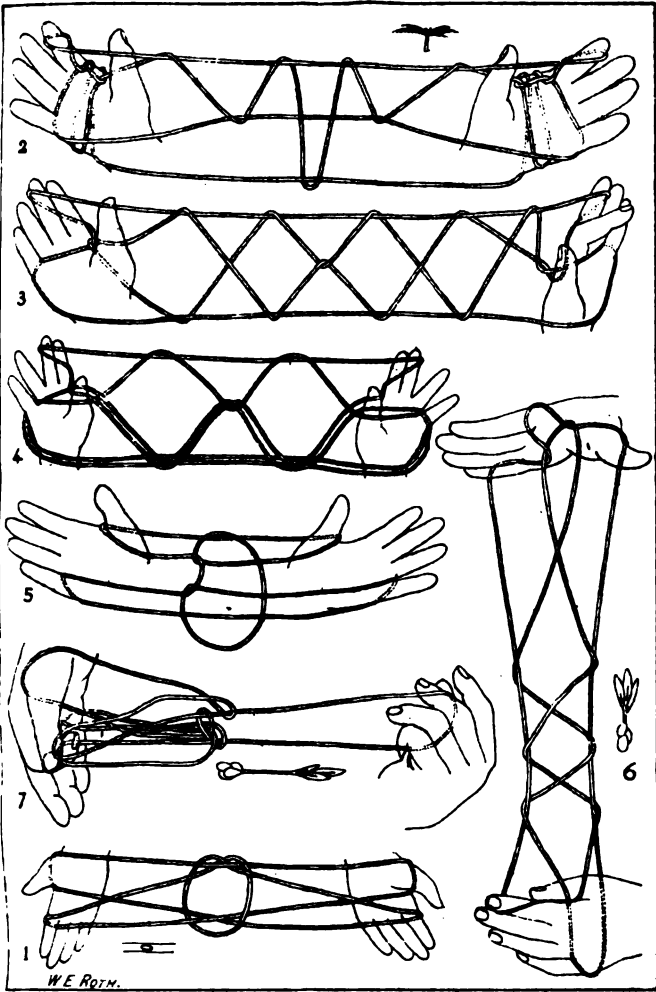


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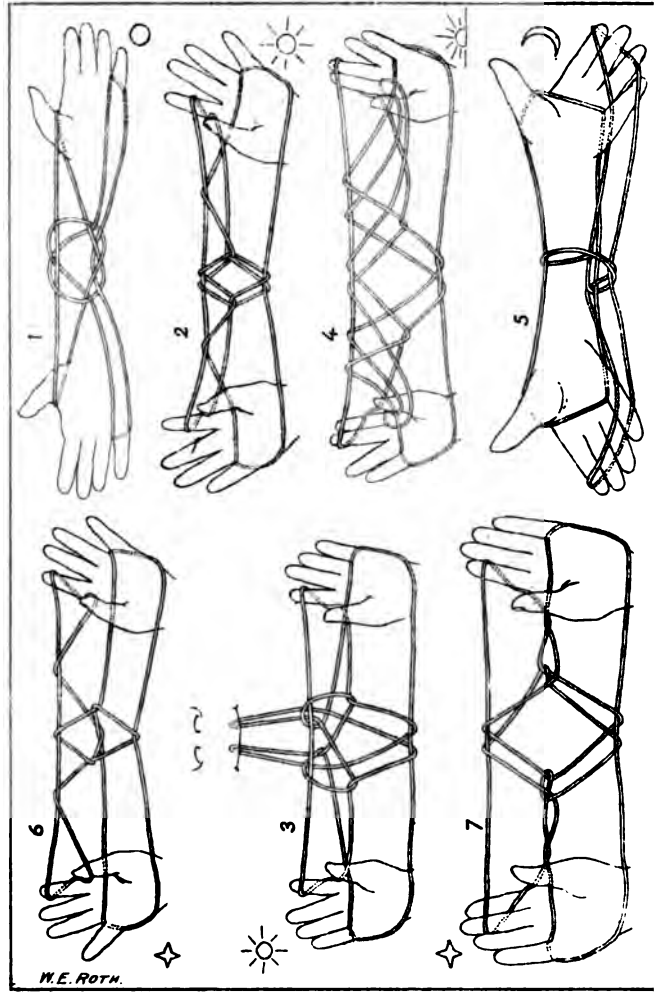


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PL. IX.

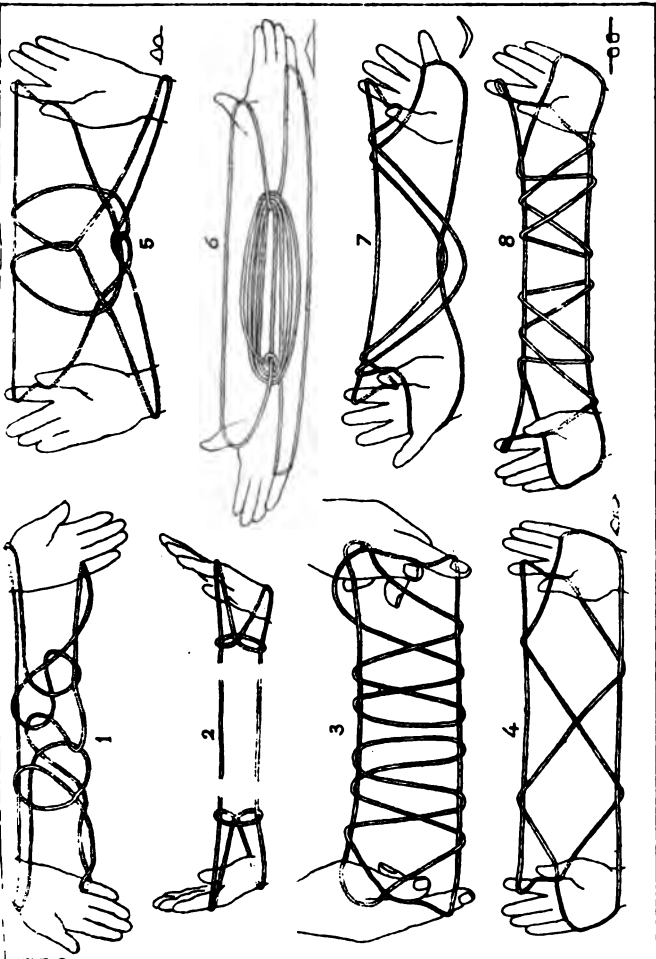


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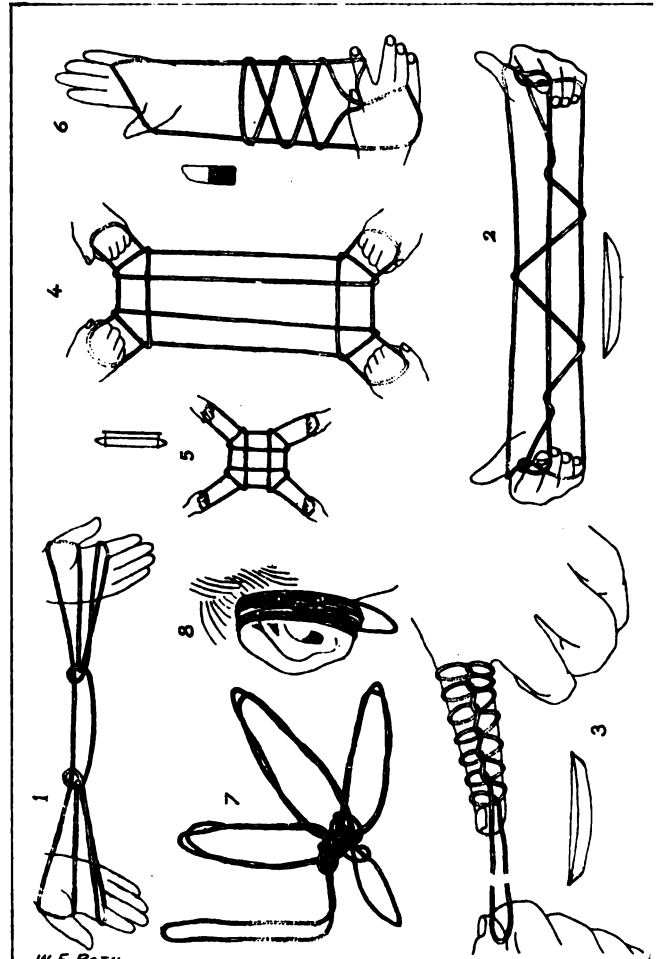


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PL. XI.



PL. XII.

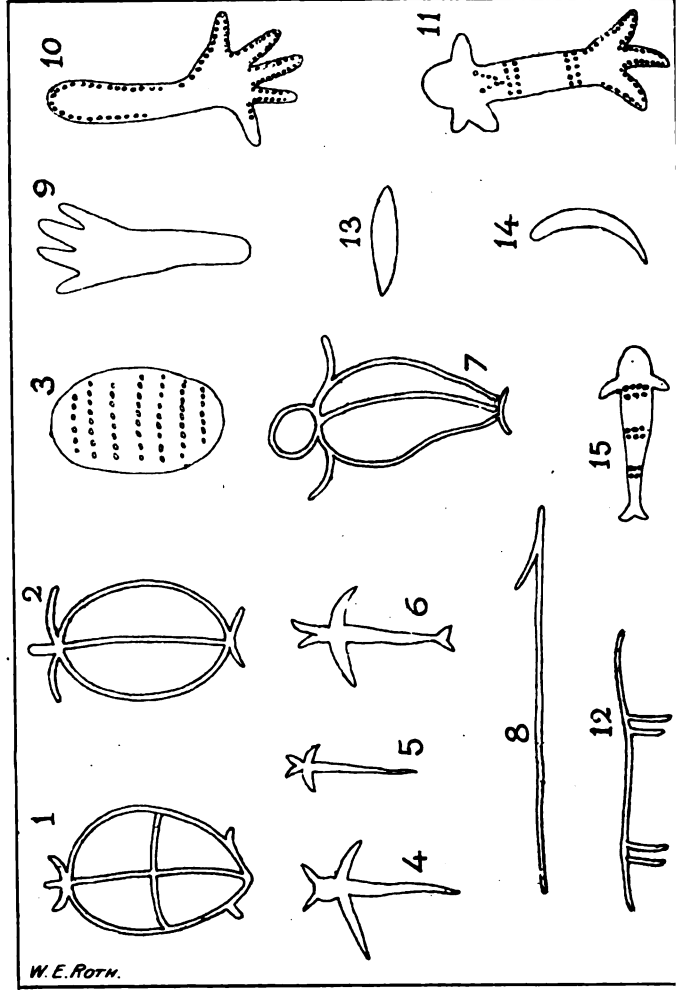


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PL. XIII.



PL. XIV.



PL. XV.



PL. XVI.



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PL. XVIII.



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PL. XIX.



W. E. ROTH.

PL. XX.



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PL. XXI.



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PL. XXII.



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PL. XXIII.



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Pl. XXV.



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Pl. XXVI.



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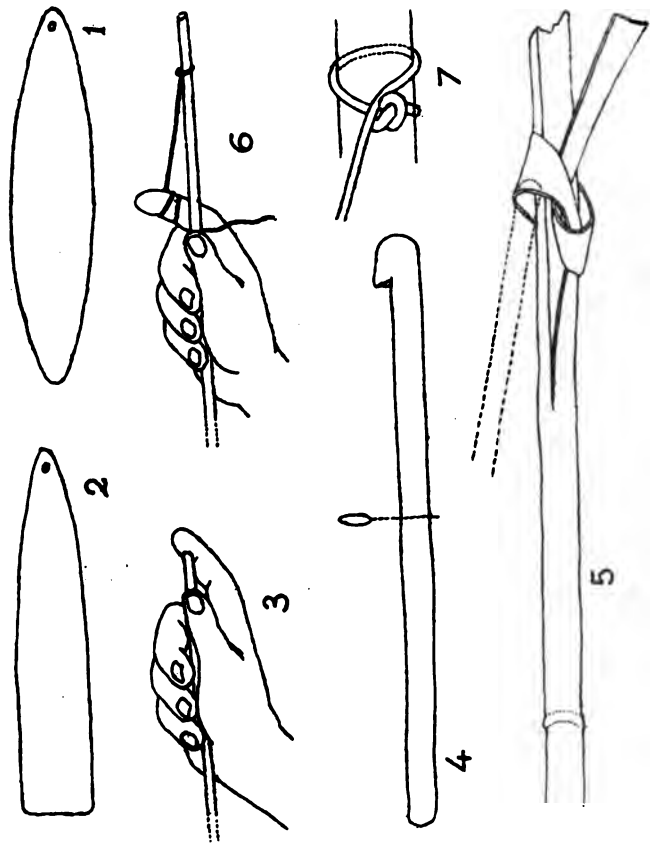


Pl. XXVII.



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Pl. XXVIII.



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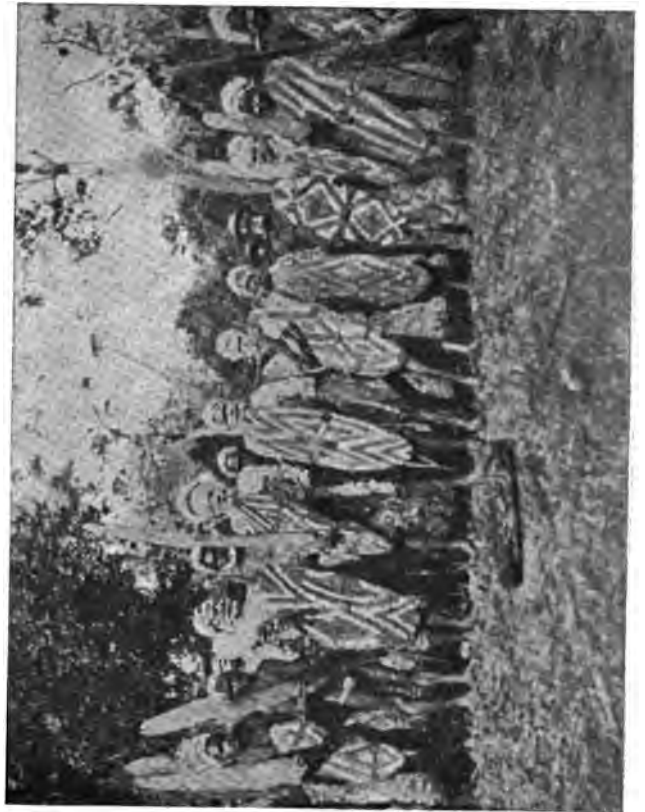
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PL. XXX.



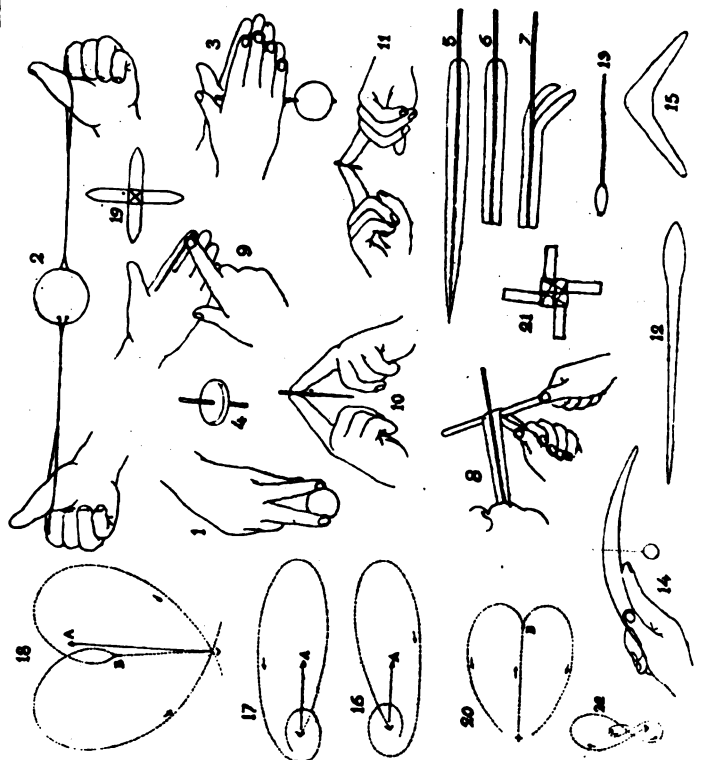
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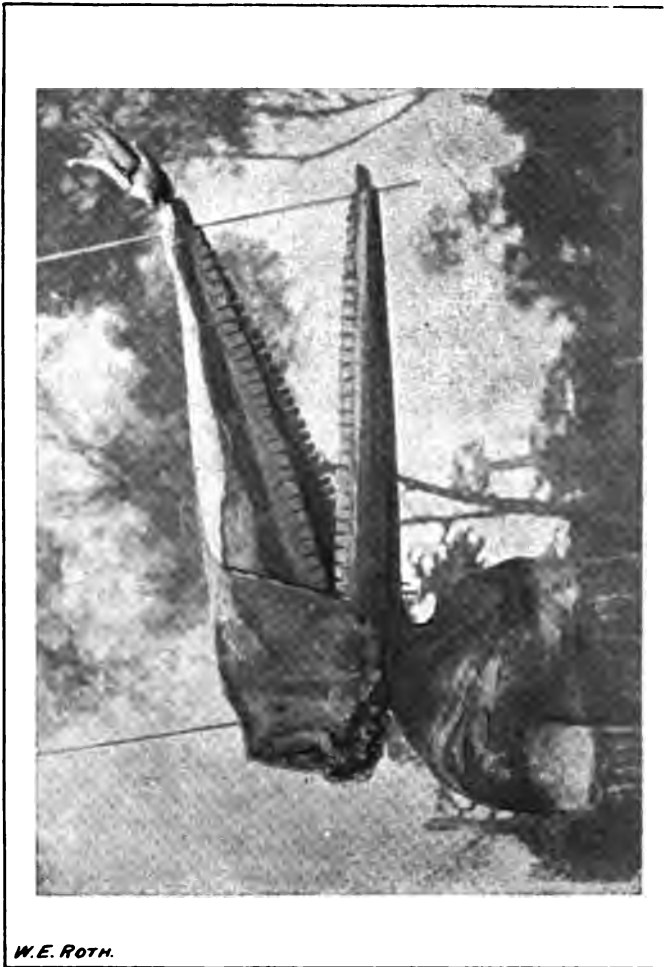
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PL. XXXIII.



PL. XXXIV.

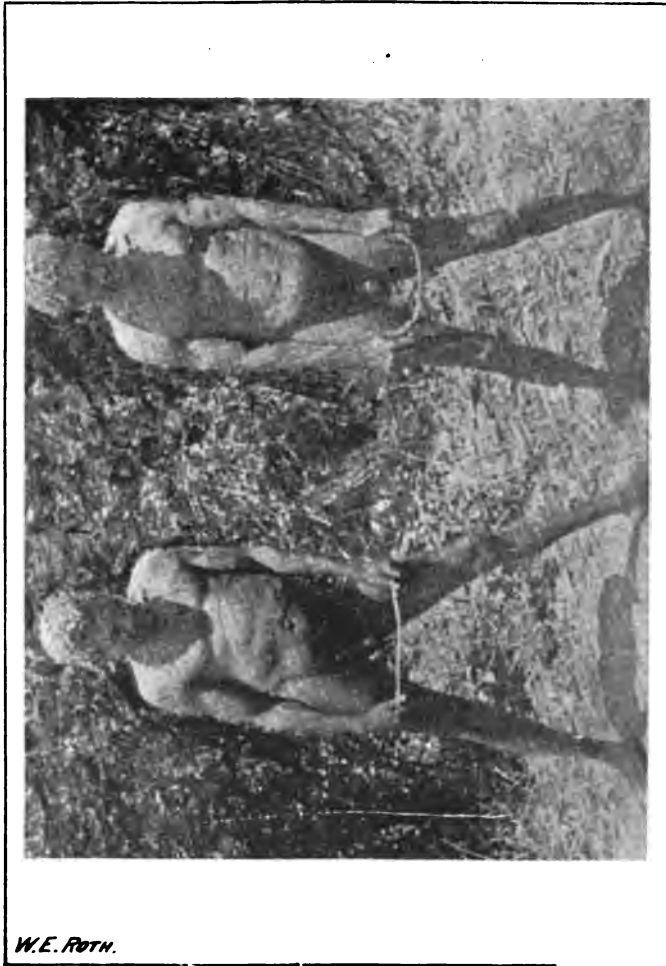


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PL. XXXVI.



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1903.
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QUEENSLAND.

HOME SECRETARY'S DEPARTMENT, BRISBANE.

NORTH QUEENSLAND ETHNOGRAPHY:
Bulletin No. 5.

JANUARY, 1903.

SUPERSTITION, MAGIC, AND MEDICINE.

BY

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(Late Demy of Magdalen College, Oxford)

THE NORTHERN PROTECTOR OF ABORIGINES, QUEENSLAND.

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND.

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PREFACE.

THE reasons which prompted me to request permission from the Home Secretary, the Hon. J. F. G. Foxton, for the publication of this Bulletin may be summed up in the following extract from a letter sent me by an English correspondent, whose position in the world of Folk-lore lends additional value to the authority of his opinions:—

. . . . "The Australian savages are certainly the most unsavoury I have read of. It is the same all over the Continent. But it cannot be helped. We want to know exactly what they are, and what are their manners, customs, and ideas; and this knowledge is not to be obtained without wading through the filth. The fruit of the Tree of Knowledge is bitter even yet. . . . Repulsive as these details are, it is essential that they should be published, for they often give the key to a puzzle that we cannot otherwise unlock."

It is to be regretted that I have not been able to gather further reliable information concerning the idea of a Vital Principle (sects. 65-69) from the Boulia (*i.e.*, North-Western) and Tully River natives, but during the past eighteen months my time has been so fully occupied with strictly official duties that I have had no opportunities of carrying on these investigations, which I trust to be able to resume during the course of the present year.

In connection with certain features of ethnological interest met with in the Northern portions of the State, I have here and there interspersed, for purposes of comparison, various notes dealing with the Southern aborigines, collected from Mr. Tom Petrie, whose reminiscences of the Brisbane blacks date from the forties.

I have great pleasure in thanking numerous friends and correspondents for kindly assistance, advice, and encouragement during the progress of this work: two who have especially interested themselves are Professor Baldwin Spencer and Mr. Sidney Hartland.

Mr. F. M. Bailey, the respected Colonial Botanist of Queensland, has again gone to a great deal of trouble in the identification of the medicinal plants, while Mr. J. H. Maiden, the New South Wales Government Botanist, has given me valuable notes concerning their therapeutic uses. Mr. H. W. Mobsby, of the Queensland Agricultural Department, has very kindly made himself responsible for the illustrations.

The abbreviations indicative of the different tribes are identical with those already given in previous Bulletins: the only new one is KAL, referring to the Kalkadun blacks occupying the wild, hilly country, including the Selwyn Ranges and the highlands (Barkly Tableland, etc.), drained by the Leichhardt and various tributaries (*e.g.*, Buckley River, Moonah Creek) of the Upper Georgina River. The tribes which I have made mention of as the Workai-a are apparently identical with the Waagai referred to by Spencer and Gillen.

Unless otherwise stated, the Tully R. refers to the lower portions of the river only.

WALTER E. ROTH.

January, 1903.

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SUPERSTITION, MAGIC, AND MEDICINE.

1. Moon and Sun. *How the moon comes to have a place in the heavens.*—Once upon a time two brothers—sparrow-hawks they were—went out hunting for “sugar-bag” (honey). They came across a hollow tree which looked remarkably like containing a bees’ nest, and cutting a suitable hole, one of them pushed his arm pretty tightly in to see if he could feel anything. To his dismay, he got his limb jammed in the aperture, and pull as hard as he could, notwithstanding his own and his brother’s exertions to get it out, there it remained fixed. At last, his brother went to seek assistance, and finding a camp in the close neighbourhood, asked his friends and relatives one after the other to come and help. Finding no one willing to lend a hand, but each excusing himself on some trivial pretext, he was just about to let them see his buttocks (to express his contempt and disgust) when he recognised his mother’s brother, the moon, sitting on the ground some distance away: in those days, the moon used to live on the ground just like other people. On the difficulty being explained, the moon immediately rose and accompanied his sister’s son back to the tree where his brother was stuck. He climbed the tree, and reaching the top, bent his head well down into the hollow, and gave a very violent sneeze, the pressure on the air from the inside thus releasing the poor fellow’s arm below, which was now easily extricated. The sparrow-hawk was, however, determined on revenging himself upon the crowd of people who, through their callousness, might have allowed him to perish. So having first of all buried the moon underground to keep him out of harm’s way, he set fire to the grass with the intention of burning the whole camp out, but some of the occupants managed to make their escape. He thereupon started another fire, and this time put the moon on the top-most branches of a high tree: and again some of his would-be victims got away in safety. But the sparrow-hawk was not going to be thwarted, and having placed the moon high up in the sky, out of all danger, he made such a tremendous conflagration that on this occasion none of the camp-blacks escaped. And this is how the moon regularly comes to take up his abode in the heavens out of harm’s way of the bush-fires. (Princess Charlotte Bay.)

2. Another explanation, and a different moon each month.—A long time ago, when the black-fellow was a turkey, he damaged his foot and ankle very badly, and inquired from his wife, the cockatoo-parrot, as to the nearest water-hole, but all she said was: “No water here.” So he asked the green parrot where the water was, and as the foot was becoming more swollen, requested him furthermore to cut it open, but the parrot said he did not know where there was any, and could not open the wound. He thereupon successively appealed to a crow, a medicine-man, an eagle-hawk, the moon, [a white-fellow doctor],* and even to the evil one, to render him the necessary assistance, but they one and all declared they couldn’t undertake the job. As a last chance, he begged the earth-worm to give him relief: the latter said he would, and thereupon bit into the swollen flesh, bored his way deep into the diseased part, sucked all the putrid matter out, and cured the patient. A large corroboree was therefore held, and the galahs, storm-birds, white and black cockatoos, butcher-birds, magpies, and bower-birds, together with the opossums, porcupines, bandicoots, etc., all took part in it. And while the turkey and the earth-worm together with the clouds and skies shifted their position—for the latter had until then always stayed on the surface of the ground—the whole party began singing “There goes our brother up.” And of course both animals remained up there. But so that the people below should always remember what a good medicine-man he had proved himself to be, the earth-worm sends a moon regularly every month to bear him in mind, for the moon is a brother of his, and like him, bores his way out of the ground, rises up on high, sinks once more and dies: as he has plenty of brothers he sends along a different one every month. (Boulia District.) The Tully River natives also believe in a different moon monthly.

3. Moon and sun: husband and wife.—At Cape Bedford the moon is the husband of the sun, and at new moon is starving, so he goes on a fishing expedition whereon he is successful, with the result that at full moon his belly is gorged: his wife is always travelling westwards after the green ants. The blacks can, of course, see the sun starting, but at night she always circles round by the south. There are really two suns, two sisters: in the cold season it is the elder one who visits them, and in the hot season it is the younger. On the Proserpine the moon is he who made the first aborigines (sect. 62).

4. Why the moon’s face is alone visible.—The moon, once upon a time, when about to bake some shells, had no tea-tree bark at hand to cover his ground-oven with. So he divested himself of his skin, which he used instead of the bark, and thus cooked what he wanted to. But when he took his skin off, his children (the bats) had no light to see by, and accordingly they got angered with him, with the result that he got beaten and was thrown into the sea. Hence, when he does put in an appearance now at each month, he covers the whole of his body, from the neck downwards, with plenty of charcoal, so that the bats cannot see where to spear him. It is only his face that is visible, and this he covers with pipe-clay, the native name of which (aró-a) is identical with that applied to the moon. The two stars in close proximity are his two wives. (Pennefather River.)

5. Danger of staring or pointing at the moon, etc.—On the Bloomfield no blacks are supposed to stare at the moon for long, as it is apt to cause heavy rain to fall. So again, children must not point at the moon with the fingers straight, nor point at their own shadows in the moonlight, because this will cause the death of their parents. On the other hand, children are not forbidden to look at one another’s shadows (*Violet Hislop*). At Cape Bedford, crabs are not believed to be any good except when caught at full moon.

* I am afraid that this was introduced by the narrator, specially for my benefit, so as to impress me with the skill to be subsequently displayed by the earth-worm, as compared with that of a European medico.

6. *The sun: a woman.*—The sun is a woman manufactured by thunder, who gave her two legs like other mortals, but plenty of hands: the latter can be seen (sun's rays) when she rises and when she sets. Being hungry she sinks into the earth or water every night to obtain iguanas, roots, or fish. (Pennefather River.) The Tully River natives consider there to be a new sun daily.

7. *Stars, etc. Represent men, women, and animals.*—The blacks speak of Orion as Wangga-dir (= canoe-with) *i.e.*, men crossing in a canoe, the Pleiades as Kabir-Kabir, *i.e.* a group of girls. Others of the constellations which I was unable to identify, are spoken of as the crab, emu, rat, snake, etc. (Cape Bedford.)

Long ago, an individual called Rolla-mano (= Sea-possessor of) went down to the mangroves, and while cooking at the fire the fish which he had caught, saw two women there. He threw his net over them, but one escaped by diving into the water. Just as he was, with a fire-stick in hand, he jumped in after her, and as the stick touched the water the sparks hissed and got scattered in all directions, and so formed the stars. The woman whom he captured he took home to his camp, where she was all alight: she it is who is now the evening star. (Pennefather River.)

8. *Represent fire-sticks, etc., connected with sick or deceased persons.*—Falling stars, from their similitude to moving fire-sticks, are often ascribed to Gi-we. This is a particular bird, evidently not recognised in the flesh, which has a connection with fire-sticks, as follows:—When a man is far away from home and family and happens to fall sick, one of his mates will throw a lighted fire-stick up in the air at night in the direction of the patient's native country, telling Gi-we at the same time over which particular tracts to travel so as to get there with the least possible delay: his family hear the cry and see the message, and consequently know that he is sick. (Bloomfield River.)

[At Brisbane, when anyone was sick in camp, and a falling star appeared, it was a sign that he was doomed (sect. 114): it was his enemy's fire-stick that was falling down—the enemy who had cut him up into pieces which he had all put together again (*T. Petrie*).]

The Tully River natives consider falling stars (chiko-binna) to be the fire-sticks which the Pitcharu, *i.e.*, spirits of enemies deceased (sects. 65, 99), carry about. It is a pitcharu who starts the bush-fires, but who puts out of reach the weapons, etc., of those blacks with whom he happens to be friendly. A falling star also means the advent of any enemy, and it is the duty of all people to shout and make as much noise as possible directly they see one: next morning, the blacks will all go out in the particular direction indicated, and look for the tracks of their would-be destroyer.

To the Proserpine blacks each falling star is a sign indicative of one of their enemies killed. The Pennefather River natives regard such a star as a female cho-i (*i.e.*, spirit of a person deceased) pouring water over the yams to make them grow. The Bloomfield blacks also often believed falling stars to be quartz-crystals.

9. The Comet seen at Mapoon, in May, 1901, was due to a fire lighted by two old women.

10. *Thunder, Lightning, and Storms. Thunder can make lightning, men, and women.*—Thunder is the most potent agency known: lightning is considered to be the fire lighted by him, and he shares with Anje-a (sect. 83) the honour of first having made men and women. (Pennefather River.)

At Cape Bedford, thunder can produce lightning by the rapid exposure of his generative organ, which he smartly puts out of sight again; hence the expression indicative of lightning, "Derrimelli golon dambar," *i.e.*, "Thunder (his) penis ejects."

Thunder and Lightning: made by human agency.—When the Tully River natives are annoyed with, or have a grievance against another tribe, they will make thunder and rain so as to inconvenience their enemies as much as they can: since they do not wish to actually kill those with whom they are angered, they purposely will not make any lightning. It is here that certain men as well as women, named after thunder or rain, are believed to have special powers in raising such storms (sect. 16).

Many Maitakudi (Cloncurry) and several Kalkadun (Selwyn Ranges, etc.) are similarly firmly persuaded that blacks, both of their own and other tribes, can make thunder and lightning. On the Bloomfield, storms are produced by killing a certain lizard (junberi), by breaking off portions of a particular lily (wuradji) which has been made tabu, or by any but old men eating or even killing stingaree. [At Brisbane thunder, lightning, or any storm was made by medicine-men in that particular direction whence it came (*T. Petrie*).]

Other Superstitions connected with Lightning.—Want of pigmentation of the hands and feet—an abnormality which is not too rare—is ascribed to the afflicted individual (sect. 76) having picked up some splinters from a tree which has been struck by lightning (Tully River). The Cape Bedford natives believe they can withstand the effects of lightning by the burning of Xanthorrhœa stumps, which produce a very dense smoke, and often practise this when there is any about: on the Bloomfield River the blacks similarly protect themselves by hiding in water-holes. [At Brisbane, during lightning, the natives always put their spears down on the ground, and hid their tomahawks: and when they had learnt smoking from the whites, they would take the pipes out of their mouths (*T. Petrie*).]

11. *Storm-making.*—Storms (wind, with rain, etc.) can be both produced and dispersed by human agency. To produce it, certain sticks are collected together into heaps in the solitude of the bush. At the McIvor River, in June, 1899, I came across a man named Ngamu-marko (=mother-rock oyster, *i.e.*, the son of the Rock-oyster) who was believed to have made the terrible cyclone of the previous March. He belonged to the coast-line further north, but could not get home again, as the Cape Melville and Barrow Point natives, through whose country he would have to pass, had made up their minds to be revenged on account of the serious injury he had done them. He assured Rev. G. Schwarz and myself that he had never made the cyclone ascribed to him, although he was a rain-maker, but that he intended making it wet for the Rosebank aboriginals who were coming here to the McIvor to kill one of his friends who was giving him hospitality. To allay the wind a particular charm is used, the Gumbamu (*i.e.*, the

name of the local north wind), about 2 feet long, made of bundles of grass, tied with vine around a central stick (Fig. 1): this is fixed either on the sea-shore, and covered with stones, so that the water can touch, but not remove it, or else placed somewhere inland, where it is hidden underground. (Cape Bedford.)

12. At Macdonnell, to make the wind come up, two charms (made up of a bundle of pieces of ground-vine, etc.), each between 3 and 4 feet long (Fig. 2), are hung up from the outstanding branches of trees in a line with the direction whence the wind and storm is to come.

13. Supposing a storm to be coming up, but it is not required, a man will rub his hand into the opposite arm-pit, hold his arm out horizontally, and swing it in the direction along which he wants the storm to pass: the smell of the sweat is supposed to drive it away. Sometimes, a wommera will be passed under the arm-pit, and used in similar fashion. Occasionally, to divide the storm, both arms may be utilised; but in this, as in other cases, the natives will not make the attempt until they are pretty sure of the direction in which the disturbance is passing. (Bloomfield River.)

14. **Rain-making, Rain, and Rainbow.** *Rain is manufactured by special individuals (Making a mound in water).*—The following description of a rain-making performance, witnessed by him at Cape Bedford, has been given me by Rev. G. Schwarz. Far removed from the camp, and without any assistance, the rain-maker collected a number of white-ants' nests, which he heaped up in a neighbouring swamp, and after trampling and pounding on them to make them firm and cohesive, he shaped them into an oblong mound, about 3 by 1½ feet, just projecting above the surface of the water, and covered it with reeds. He next made a trench all the way round in similar fashion, continually repeating the word "do-ré" (*cf.* doril, dore-lil—to eject) throughout the whole procedure, which he finally brought to a close by sprinkling some water in all directions of the compass. Before taking his departure, he got two sticks, about 18 inches long, rolled them up in reeds, and fixed them into either end of the mound on to which, as he walked away, he threw some water behind him. No one is allowed to go near such a spot where rain-making is practised. So much so, that when rain did not subsequently fall on this present occasion (Mr. Schwarz having promised him, in the presence of the whole camp, a bag of flour if rain fell within twenty-four hours) the rain-maker explained his non-success to the other natives as due to the presence of the missionary. On other occasions, when rain does not fall, failure is explained by some one having visited the forbidden spot.

15. (*Squeezing bubbles under water: Dipping wommera in water.*)—Rain can be made by persons, males, possessed of the gift, diving into a creek, and stirring up and squeezing the leaves deposited at the bottom, so as to cause bubbles to rise to the surface. It can also be produced by a man who has been through the initiation ceremony, dipping his wommera into the water. (Bloomfield River.)

16. (*Hanging up whirlers, etc.*)—Rain is a person, and certain men and women who happen to be named after him can make him come. The process usually adopted is to hang a "whirler" into the water of certain pools. This implement is about 18 inches long, made of *Flindersia Ohatawaiana*, Bail. (MAL ngarku), bears no marks or ornamentation, and is called a milka. Even if the rain does not come for several weeks later it is nevertheless considered due to it: and when produced by this method of whirlers is also called Milka. If the individual wants lightning and thunder (which are considered to be one and the same thing) to accompany the rain, he will in addition throw chips of the *Sarcocephalus cordatus* into the pool. Any adult male or female individual (not necessarily a name-sake) happening to lose his or her temper, may threaten to call for rain, which, when it comes under these circumstances, is spoken of as Kwi-yur. The coastal blacks have the reputation of bringing up the cyclones. (Tully River.)

17. (*Building a hut under water: Burning a special timber.*)—Both Koko-warra and Koko-lamalama can, some of them, make rain by means of what is said to be a "humpy" built under water. (Princess Charlotte Bay.)

Old men, especially warriors, can bring the rain: they can also make it come to a stop by burning a certain kind of timber known to the natives as tra-la. (Pennefather River.)

18. (*Fixing a rain-stick under water, etc.*)—With the exception of perhaps a few of the Yanda tribe, there are no individuals in the Boulia district who know how to make rain. Accordingly, when rain is wanted here in Boulia word is sent down to the Mai-orli men at Springvale or the Diamantina Gates to come up and make some. This special performance, carried out with a rain-stick, a song, a scratching, and a dance, takes place somewhat as follows:—The Kurumando or rain-stick is formed of a thin piece of "white" wood, about 20 inches long, and on to the top of this is fixed a mass of the ordinary (spinifex-gum) cement-substance into which the three pieces of quartz-crystal (the "rain-stones") are stuck. Hair cut from the beard is next laid lengthwise on to the cement, and fixed an inch or so below it: over this again are laid leafy branches of "white-wood," which is all tied round with string, after the manner of a straw broom. Three or four of such sticks may be used in the ceremony. At about mid-day the men proceed to a secluded water-hole, one or more of their number having been previously deputed to dive into the water and fix a hollow log, about the length and thickness of a man's arm, vertically down into the mud. They now all get into the water, and surrounding the central individual, *i.e.*, the one who holds the Kurumando, in more or less of a circle, commence proceedings with a stamping movement of the feet, each performer keeping the same relative position to the others. Considering that the water may be sometimes 4 or more feet in depth, the "dancing" is maintained with no little difficulty. During this part of the performance the water is splashed with their hands, from all sides, on to the Kurumando, held vertically on high by the central figure: there is a singing accompaniment to this, but the Pitta-Pitta men are evidently ignorant of its exact literal purport. The singing over, the central figure dives out of sight, and attaches the rain-stick into the hollow log previously fixed there: coming to the surface, he quickly climbs on to the bank, and spits out on dry land the water which, while diving, he had obtained from below. Should more than one of these rain sticks have been prepared, the performance is repeated with each in turn. As they return to camp, they now and again with any small twig just scratch the tops of their heads and inner aspects of their shins, singing "panjo-pari, panjo-pari" in the former case, and "wongka-pari" in the latter. [*cf.* panja=Mai-orli term for

hair of head; wangka = Kalkadun name for shin or leg.] It is believed that if the scratching were to be done with the fingers direct, it would spoil the whole ceremony. On the arrival of the party back at camp, the men who have been taking part in it paint themselves with gypsum in thick bands: from the top of the head down the middle of the face and neck as far as the umbilicus, a transverse one over the face across the bridge of the nose, and a third and fourth drawn from the extremities of the last-mentioned down the side of the neck, over the shoulder, along the front and outer aspects of the arm and fore-arm to the wrist. During the rest of the day the scratching process, accompanied by the singing, is repeated at intervals, and the performance comes to a close. No woman is allowed to set eyes on the rain-stick, or the ceremony of its submergence: the wife of the "boss" rain-maker may, however, join in the subsequent twig-scratching. There would appear to be no special individual among the Mai-orli who alone can make rain: any of the tribe can learn the process, and when once in possession of the crystals will be successful. When the rain does eventually fall, the Kurumando is removed from out of the water. At Boulia, during the heavy floods and rains of January and February, 1895, I was assured, on native authority, that all the rain and water had as usual been produced by the Mai-orli men: when I begged of them to immediately stay proceedings, the reply came that as the flood had risen too quickly to allow of the removal of the rain-stick from out of its submerged position, the rain would have to run its course. Instead of coming up to Boulia, the Mai-orli rain-makers may visit Marion Downs: from the former locality they may proceed for similar purposes to Warendah, Noranside, Chatsworth, etc.

19. (Imitating falling rain, and the antics of aquatic animals.)—On the Georgina River, at Roxburgh Downs, a piece of quartz-crystal, the rain-stone obtained from somewhere out in the ranges, is crushed and hammered to powder. Some very straight-stemmed tree is chosen—generally a "bloodwood" with the butt for a long way up free from branches—and saplings, from 15 to 20 feet in length, are ranged all round it in the form of a bell-tent, forming a sort of shed. Outside, in front of this erection, a small space of ground is cleared, a portion scooped out, and some water placed in it. The men, having been previously collected within the shed, now come out, and dancing and singing all around the artificial water-hole, break out with the sounds and imitate the antics of various aquatic birds and animals, *e.g.*, ducks, frogs. All this time the women are camped at about 20 to 25 yards distant. The men next form themselves into a long string, indian file, one behind the other, and gradually encircle the gins, over whom they throw the crushed and pulverised stone: the women at the same time hold wooden troughs, shields, and pieces of bark over their heads, and pretend that they are protecting themselves from a heavy downpour of rain.

20. (Singing special songs and using special decorations.)—At Headingly, Lake Nash, etc., on the same river, the Yaro-inga have their rain-making at night, the ceremony commencing with sun-down and ending at sun-rise. The men who alone take part in it, are decorated with red and white feathers stuck on with blood: a basis of white over the face, neck, arms, chest, and trunk down to the waist, with two parallel vertical bands of red passing down the centre. On the head is worn a thick roll of emu feathers, a sort of min-ma (sect. 154), with one turkey-bustard feather stuck on top, and to the shaft of which are attached five or six long opossum-string streamers falling down the back. To the usual hair-belt are fixed an eagle-kawk feather bundle at either side, and one of white cockatoo feathers in front. My informants could render me no interpretation of the accompanying songs.

21. Some of the Kalkadun of the Selwyn, etc., ranges can also make rain. The feather-down of the emu is stuck with blood over the whole face, neck, and chest, back and front, down to the waist, including the upper limbs as far as the wrists. The performance, in which two or three old men, never young women, take part, is carried out at mid-day, when the sun is high up. They were taught the proper song from the Workai-a at Carandotta, and so are ignorant of its meaning. At Devoncourt a sort of "soap-stone" rubbed with fat is believed to be brought into requisition.

[At Brisbane, spitting could both cause and stop rain: in the latter case, the natives would in addition throw a lighted fire-stick up in the air (*T. Petrie*).]

It is true, when all is said and done, that as a rule rain generally follows upon these performances, but at the same time it should be remembered that rain-making is only practised at certain seasons of the year when the various atmospheric conditions afford a likely indication of its advent to the more experienced and quicker-witted individuals who presume to produce it.

22. Rain produced by burnt hair.—It is a firm belief at Cape Grafton that heavy rains are sure to follow if hair is burnt (sect. 77).

23. Rainbow: due to a fish or snake: connected with scars and miscarriages.—The rainbow at Red Island, etc. (Cape York) is the reflection of a huge fish, supposed to live far out at sea, appearing in the sky after the manner produced by a bush fire: hence the natives speak of it as a big fish with its belly up. At Cape Bedford it is supposed to represent excrement in course of ejection from a species of large shark, both the rainbow and the creature producing it being known as Yirmbal. The Pennefather River blacks regard this phenomenon as a very bright-coloured snake which comes up to stop the rain that has been wilfully made by their enemies: this particular reptile is recognised in the flesh, both being known by the same name—Andrénjinyi. The Tully River natives ascribe a scar on the head, a miscarriage, etc., to the action of the rainbow. The Proserpine River blacks had a belief in rain being made from a quartz-crystal obtained at the spot where the arc of the rainbow touched the earth. [This is of interest as compared with the superstition held at Brisbane, where the rainbow or Targan was believed to be held by an individual of the same name who lived at the bottom of deep pools and who was supposed to vomit up the crystals used by the medicine-men (sect. 121). Thus, where one extremity of the arc ended, there Targan was. The aboriginal would travel to the river or pool where the rainbow was located, dive down and fetch up these crystals, at the same time cutting the bow so as to make more rain come (*T. Petrie*).]

24. The sea. Made as a punishment, etc.—The origin of the salt water is thus explained by the Pennefather River blacks. In the beginning men and women used to be made by Thunder. As the result of their union two sons were finally born to one of these couples: the elder was a good boy, the

younger a bad one. These boys went into the bush with their spears, and brought down a big kangaroo. This they opened with a shell, and cutting it up to roast found the bones of a man inside: during the process these human bones got damaged and destroyed. Thunder got very angry with them for spoiling his handiwork, told them to leave things alone, and ordered them to clear out at once. The younger brother refused, because he wanted to eat the beast: the elder did his best to obey, but what with his fright and confusion, instead of backing out in a straight course, lost his bearings, and kept circling round and round, returning each time to where his brother was, and on each occasion entreating him to come home with him. The latter again and again deliberately refused to leave his kangaroo, so the lightning, which was sent by Thunder, struck him several times: each flash causing him to sink deeper and deeper into the ground: at last the man disappeared altogether, and where he had sunk the salt water came into being, and spread itself over the surrounding country. Finally, the elder boy found his way home, and when asked where his brother was, he told his mother that he was on the road and close up behind. She went to look for him on her own account, but the depth of sea already formed prevented her, and finally she had to give him up as lost.

25. Fire. *Obtained from the skies by a bird.*—In the days of long ago, according to the Cape Grafton blacks, there was no such thing as fire on earth, so Bin-jir Bin-jir, a small wren with a red back (*Maturus* sp.) went up into the skies to get some. He was successful; but so that his friends on earth should not have the benefit of it, he hid it away when he returned in the evening by sticking it under his tail. Asked how he had fared, he told his friend that his quest had been fruitless, but at the same time suggested to him the advisability of trying different kinds of timber. The latter thereupon worked away with various pieces of wood, made his hands very sore in trying to kindle a flame by "twirling," and finally gave up the job in disgust. However, on suddenly turning round, he burst out laughing, and Bin-jir Bin-jir quite innocently asked him the cause of his merriment. "Why," said his friend, "you have got some fire stuck on to the end of your tail" [referring to the red spot on the bird's back.] Bin-jir Bin-jir was therefore obliged to admit that he did get some fire, and finally showed his friend what particular wood to make it from.

26. Discovered by a bat.—On the Pennefather River, old mother wallaby, who used to occupy the country in the neighbourhood of the ant-hills, was the first to make fire, of which she had plenty. But it went out one day with the result that the bat couldn't see what he was doing, and accordingly he had to try the various kinds of timber until he discovered the right one to suit.

27. Will frighten evil-disposed spirits away.—Blacks are always afraid of going out after dark without a firestick, except when engaged upon some special purpose—*e.g.*, murder, elopement. The reason invariably given is that they might be caught by some one or other of the various spirits which prowl about after nightfall. At Miriam Vale, a firestick even when extinguished acted as a protective at night, the cold charcoal being itself quite sufficient to scare away any evil spirits. On the Tully River also, fire is a great safeguard. For instance, shadows, both at day and at night, are due to the Koi, or Ku-inggan (male or female spirit) of the person making them, and travelling about at night can render their presence evident (section 65): thus, on the night previous to one of my visits to the Tully, Koi had come to the local camp and thrown three sticks at the blacks. Such a Koi makes the natives "shiver," but they cannot get rid of him until one, to whom he has not yet rendered himself visible, lights a fire which alone will make him take his departure.

28. Plants.—The bamboo-cane is found in isolated patches in the hinterland of Princess Charlotte Bay, where it is used for a special variety of spear. It is believed by the Koko-rarmul natives to have got to the Hann River as follows:—A finch came and stole the rain from the country traversed by the Hann, and took it away north with him to his home in the neighbourhood of Port Stewart. A small red-bird, resident on the Hann, revenged himself by going up to the Port, stealing the roots of as many bamboos as he could, and planting them on his return around his own camp.

Double-fruits in bananas, nuts, &c., are believed to be made by certain invisible beings for the sake of amusement—"sports" in a double sense. (Bloomfield River.)

29. Animals. *Why no more big guard-fish are caught.*—There used to be a time at Mapoon when these fish were so big that it required many men to haul one in when caught in the net. Well, it so happened on one occasion that an extra large-sized fish was caught, and in anticipation of a hearty feast the blacks proposed making a big fire to roast it in. But they were all too lazy to get the necessary firewood, each individual excusing himself by saying that he would help draw the net, cut the fish up, &c., &c., if the other fellow made the fire. Thus, while they were proposing everything, but doing nothing, the fish got away, and no large ones have been since met with; they are all small-sized nowadays. (Pennefather River.)

30. Scarcity of fish explained.—When fish are scarce at Cape Grafton and Cape Bedford, it is because the women have broken the tabu by eating mullet or stingaree.

31. How the fish came to have its present shape.—A snake and a fish had a fight; the former turned out victorious, and for punishment made the victim carry his skin [the scales] and bones [dorsal-fin] on his back. (Boulia District.)

32. Why crocodiles and iguanas travel up-stream in flood time.—This fact is explained on the hypothesis that if these creatures were to travel in the opposite direction, the force of the water is so great that it would suddenly rush into their posterior orifices and kill them. (Middle Palmer River.)

33. The first crocodile.—Many years ago there was a certain old blackfellow living high up on the ranges between the Embley and Archer Rivers. Finding that the exertion necessary for hunting even for his own requirements was a little too much for him, he caught an iguana and stuck bees' wax over it; a big lump on either side of its belly to make it fatter, a large chunk on its head to make it bigger, and a long piece on its tail to make it longer. Thus he fashioned out the first crocodile, and tying a rope to one of its legs, taught it to catch turtle for him, then some dugong, and then other men and women. One

day, however, it got loose from its rope, and commenced attacking other animals and men on its own account, a practice which it has continued to follow ever since. It never attacks its inventor, however, who is an old man now, and distinguishable from other men by the possession of some peculiar scars on his wrists, face, and back. My informant saw him some three or four seasons ago. (Pennefather River.)

34. [Another version.]—A very long time ago, the little wag-tail used to live on Alpartara—Rocky Island—an ait in one of the lakes on Lakefield Station. In those days there was plenty of grass and timber there, and plenty of food. However, what with the cold and wet, the wag-tail could not keep himself warm, so he went over to the owl's place, and begged him to let him have some fire, a request which was refused. He thereupon waited till nightfall, and, during the absence of the proprietor, stole the fire-sticks from off the owl's hut. He thus got his fire lighted, flew away to Rocky Island, burnt all the verdure off, and returned the fire-sticks to the place whence he had stolen them. The owl, on his nocturnal wanderings, finding a large portion of his hunting-grounds destroyed, soon recognised by whom and how this conflagration had been brought about. He thereupon set out to fight the wag-tail, but the latter (who was justified in his conduct owing to his adversary having refused him the loan of a fire-stick) made a crocodile, and with his assistance proved victorious. Even now, the wag-tail is often to be observed in company with a crocodile. (From the Koko-warra of Princess Charlotte Bay.)

35. Why iguanas are so plentiful.—An old ancestor of the blacks, recognising the scarcity of these creatures in his day, thought it would only be a fair thing to make better provision in the way of a better supply for his progeny. With considerable difficulty he managed to find a fine specimen of iguana which he speared and cooked. Instead of eating it, however, he cut it up into innumerable pieces, which he strewed about in all directions. And where each piece fell, there an iguana grew. (*Ibid.*)

36. How the iguanas learnt to burrow.—Out of pure devilment, the frog wanted to kill the iguana: this was all the more wicked as they had always been good friends. At any rate, having driven his would-be victim into a water-hole, the frog started poisoning the water with the necessary bark, etc. [as employed in catching fish], and watched complacently from the bank for the body to float. He was disappointed, however, for the iguana had made a hole at the bottom of the pool, burrowed a considerable distance under the ground, and thus made good his escape. (From the Kokorarmul of Princess Charlotte Bay.)

37. Why lizards are always running about.—A lizard was playing with his brothers on the corroboree ground at Arnau-o, the 18-mile swamp (Musgrave Native Police Station). They were having a wrestling match, and he got very angry at being thrown so often. Indeed, his temper got so much the better of him that he ran up a tree and shook a spider's nest over his companions, with the result that their backs became covered with the little pellets of dung. This was more than the other lizards would put up with, so they started chasing him, but notwithstanding that they have been, and still are, hunting for him, they have not yet succeeded in catching him. When they do they will punish him. (*Ibid.*)

38. The salt-water turtle.—In the olden times the black turtle used to live on land where he was wont to make himself very objectionable by always stealing water from the other people. It would seem that he gathered the water in his arm-pits, and stored it there for the dry season. All this proved a great hardship to the kangaroo, opossum, plain turkey, hawk, and emu, as well as the brown snake, each of whom, whenever he or she went down to the water's edge for a drink, was hunted away. At last all these poor thirsty souls got up a magnificent corroboree which—what with the singing and dancing—soon attracted the turtle. He came nearer and nearer, his curiosity forcing him into close proximity to the emu who, dancing gaily away, lifted up her leg and with a little extra pressure kicked him along the flanks and arms. All the water that was being stored there thus fell down and spread itself over the ground, whereby the other animals managed to drink their fill. The turtle was punished for his greed by being forced to go down into the sea and remain there. (From the Kokowarra of Princess Charlotte Bay.)

39. The fish-hawk and the pheasant.—The fish-hawk had poisoned a water-hole, and went away to have a sleep until such time as any fish should rise to the surface. In the meantime, a pheasant came by and seeing some fish floating, let fly his spear and killed some. The hawk upon his return, seeing what had happened, waited his opportunity and hid the spears on the top of a high tree. This, however, did not prevent the pheasant climbing the tree, taking possession of his spears, and getting some more fish. The hawk thereupon concealed his adversary's spears a second time, on a much higher tree. The pheasant had a look round, and down and up, and at last discovered where his weapons were, but was much too lazy to climb up all that distance for them. He was spiteful enough however to go and make some rain at the head of the river: this brought the floods down and these caught the hawk at the water-hole and drove him and his fish into the sea. The fish-hawk is now found only along the coast-line, while the pheasant is looking for his spears on the higher branches of the trees. (From the Kokorarmul of Princess Charlotte Bay.)

40. The first fish-hawks.—Two men were hunting turtle, but one always caught males, and the other one females. Now this was just what each did not want, for the one who caught bucks was anxious to get eggs, and he who caught females wasn't. Naturally, they got very angry, and began swearing, words soon giving way to blows. They knocked each other over the faces, and broke their noses (the present hooked beaks), while the cuts over their bodies gave rise to feathers—like wooden chips when a log is cut. They are fish-hawks now, and cannot hunt turtle any more, but have to content themselves with fish. (Pennefather River.)

41. The geographical distribution of the pelican and emu.—In the days when the pelican and emu occupied the same tract of country, the former was being continually worried by the latter always persisting in camping alongside. You see the pelican was a good worker and used to get plenty of firewood: the emu on the other hand was a lazy fellow, and was always burning the timber which his companion took the trouble to collect. From growling they got to quarrelling, but being the smaller bird, the pelican had to exercise all his wits to get the advantage. So he told the emu that if he put his

arms (wings) in the fire they would burn much better than the wood. The foolish bird acted on the advice, only to find that his wings had become singed, burnt, and shortened: his legs however being still available helped to kick his adviser into the water. It thus happens that the emu does not get interfered with in hunting for berries and nuts on the dry land, while the pelican fishes unmolested in the salt-water: they now have nothing in common—not even fire-wood. (*Ibid.*)

42. *The water-hen and the emu.*—An emu was hatching her eggs in close proximity to a small water-hen, who was also engaged in the same interesting occupation. By and by both birds proceeded to walk along the grass in search of something to eat, and in the evening returned to their respective nests. The same thing happened next day. But on the following morning the water-hen got up somewhat earlier than usual and went her way. The emu, happening to see her neighbour's eggs, said, "Hullo! Big-fellow eggs all same belong me: me take him," and shifting from her own nest, sat upon them. As the afternoon drew on, the water-hen returned home, and when she saw the emu appropriating her eggs, began swearing, but being so much smaller a bird could not use force to turn her away. So she built a large fire, and threw the ashes over her opponent, who thus got all her feathers browned: in retaliation, the emu threw the hen into the flames, and burnt her legs for her, which resulted in their turning red. (Boulia District.)

43. *The red tit and the brown tit.*—[The former, *PPT. munatimpiella*, has a red head and breast, the latter, *PPT. tinerta*, is a brown bird living among the porcupine-grass: both are up to 2 or 2½ inches long.] "Come and catch some kangaroo," said the brown to the red tit: "No!" the latter replied, "me go look out 'wituka' [roots of the *Boerhaavia diffusa*], and then me go along camp." On their return, after a successful expedition in both cases, the red tit wanted to exchange some of his wituka for kangaroo-flesh, and asked his friend to have some, but the only answer he got was, "No! me no eat him: me get guts'-ache." When the brownie had finished his meal, he hid what remained of the kangaroo-flesh up in a tree, and cleared the ground all round the butt, so that if the red bird were to steal some, he would be recognised by his tracks in the smoothed sand. By and by the red tit began to think what he had better do. Having thought the matter over, he proceeded to the sand-hills, where, seeing some emu-tracks, he dug four or five pit-falls close up against some wild-grape vines, and then returned home to camp. He brought some wituka back with him. It was now night time, and still keen on getting kangaroo meat, he again offered the brown bird some of his roots in exchange, but being refused retired to rest very much disgusted. Early the following morning, however, he went to have a look at his traps, and finding them full of emus, cooked and skinned them: what flesh he could not eat he brought back to camp close alongside the particular tree where the kangaroo meat had been placed. His mate soon saw him, and said, "Hullo! you been catch him emu? Here! give him me. Me give you kangaroo." But the red tit, having the advantage, said, "No! me no want tuck-out kangaroo now. Might get long ears" [*i.e.*, like a kangaroo], and proceeding a second time to the sand-hills returned with some more emu-flesh, and again refused to barter, on the grounds that he might get a long tail as well as long ears. And though the brown tit assured him that he had already eaten two kangaroo, and had noticed no special growth either in his ears or in the lower part of his back, the red one would not come to terms. Of course, as might be expected, they both soon got into a temper, and began to fight, the brown bird with a kangaroo-tail, and the red one with an emu-leg: the scrimmage lasted a long while, the red tit getting his head and breast besmothered in blood, and the brown tit having his head and beak battered into their present shape. (Boulia District.)

44. *The more-pork (*Podargus* sp.) and the goose.*—The more-pork came across a bed of sweet lilies and, being a greedy fellow, ate them all himself—he never said a word about it to his wife, the goose. She, however, found it out by examining his dung, and set about discovering the place where the lilies grew. She experienced no inconsiderable difficulty in her quest, but at last succeeded in locating the spot—a small lake on the eastern side of the Normanby close to Balser's Knob. The more-pork happened to be in the close vicinity when his wife got there, and picking up a piece of quartz threw it at her: he missed her the first time, but, trying again, hit her on the head and killed her. Where the goose was struck, a bruised swelling was developed. Her mates, however, were not slow in avenging the death, and two or three of them waited their opportunity. This was not long in coming, for shortly after they came across the camp where the more-pork was resting, and close by were some hot ashes on which the lily roots were being roasted. The geese got quite close, and disarmed all suspicion by offering to pick the fleas off his beard. Delighted at this delicate attention, the more-pork sat calmly back with eyes closed, and opened his mouth to receive each flea as it was caught. His demeanour was suddenly changed to one of astonishment and rage when the geese put into his mouth a piping-hot lily, surreptitiously taken from the ashes. This caused his mouth to burn and swell, and accounts for his appearance at the present day. (From the Koko-warra of Princess Charlotte Bay.)

45. *How the native-companion learnt to dance.*—During the course of an initiation ceremony among the Koko-warra blacks at the mouth of the Normanby in November, 1898, I happened to ask the chief old-man how it was they came to know all the dances representative of the different animals, of which they showed me examples? He informed me as follows:—A very long time ago, the native-companion found a ground-chili, and not knowing then that it was hot and poisonous, ate it, the result being not only that his head and beak, etc., took on a scarlet colour, but that he became "all the same drunk." It was during this predicament that he learnt his steps, and these he taught to all the other animals, each one owing to some physical peculiarity developing a variation in the dance. The present day blacks had been taught all these by their elders.

46. *The parrot and the water-snake.*—Two women—a parrot and a water-snake—were sitting at the water's edge in a very discontented state of mind: the fact is, they had got tired of their husbands, two big eels, and wanted a change. In response to their solicitations, a large eagle-hawk accepted all responsibilities, and gratified their wishes. In course of time each woman bore a boy which was duly brought to the hawk's camp for the father to fondle and caress. But when he looked at them, and recognised their hybrid constitution, he could not refrain exclaiming, "Piccaninny no belong me," though all inquiry from amongst his friends as to whether any of them had been tampering with his two women

proved fruitless. He therefore sent the ladies away on a yam-hunting expedition, and in the meantime took the two boys with him for the ostensible purpose of catching opossum. Coming to a likely tree—a comparatively hollow one—the hawk sent the lads up and told them to climb into a certain hole, which he pointed out to them some considerable way up. As soon as they had disappeared, he took a tomahawk and made a hole low down in the butt, and stuffing grass therein, set it alight, and roasted the poor boys to death. So that suspicion should fall upon the shoulders of others, he stuffed their bodies with native onions to give them the appearance of being plump little opossums, and then putting the corpses into dilly-bags hung them on a branch well out of sight. By this time the mothers had returned, and in reply to their inquiries as to where their children were, the eagle-hawk told them that they were playing behind the trees with their grass-spears. The parrot and snake naturally went to see for themselves, and to their grief and dismay soon recognised all what was now left of their offspring. But they got their revenge that night: they made a big nest for him, composed of sticks and leaves, and as soon as the hawk fell asleep, set it on fire. The snake then took to the water permanently, only stretching her nose out occasionally to get the news from the parrot, who is still poking among the holes in the trees in the hope of getting tidings of her dead children. (*Ibid.*)

47. *The geographical distribution of ducks and porcupines.*—In the times long before the advent of the whites, whistler-ducks and porcupines used to share the country equally, *i.e.*, they lived peaceably both on land and in water, the one never disputing the claims of the other. But it so happened that the whistler-duck, who required a "quill" for his nose-pin, attempted to take one without permission from off the porcupine's back: the latter, naturally resenting such treatment, showed fight. Then commenced a battle-royal, the whistler calling to his assistance black and other duck, with the result that the porcupine was driven to seek refuge in the holes and fastnesses among the hills, where he still remains, the ducks, in the meantime, monopolising the water-holes. (From the Tarumbal of Rockhampton.)

48. *How the crow got her black plumage.*—Two rain-birds were engaged in a wrestling match, and the elder one, finding himself beaten, began to lose his temper. The younger one, of course, was anxious to prolong the struggle. In order to separate them, their mother (a crow) covered herself with excrement, and rendering herself thus dark and offensive, soon frightened her sons into obedience. The crow has kept her colour. (From the Koko-minni of the Palmer River.)

49. [*Another version.*]—A crow and a hawk had a fight. The hawk succeeded in knocking his adversary over and rolling him in the ashes, whence his black plumage: he himself got punished, however, by being made to eat putrid meat. (Boulia District.)

50. *The galah parrot and the lizard.*—One time there was a row between the galah and the lizard. The latter took up an adze with which he cut the bird upon the head, the result being that his "top-knot" jumped up like a wood-shaving, and the blood streaked down over his neck and breast [the red feathers]. The galah, however, revenged himself by getting a lot of prickly burr and sticking it over the lizard's back so as to form the warty growths there. (*Ibid.*)

51. *The galah parrot and the opossum.*—A galah and an opossum were fighting one day, with the result that they both got very much damaged: the parrot had his neck and breast all cut open [red plumage], while the opossum received a black mark on his snout. (*Ibid.*)

52. *The "laughing jackass" and the blackfellows.*—Two natives were hunting up a big mob of emus, and having got everything ready in absolute silence, were just about to drive them into the net when a jackass burst out laughing and frightened the emus away. Of course, the blacks were very wild at having lost their intended prey, and killed him. The bird now always laughs at their failure in catching emus. (*Ibid.*)

53. *Why flying-foxes hang from trees.*—The striped-tail lizard went to hunt up a mob of blacks, but couldn't find any, yet, in order that the flying-fox shouldn't ridicule him on his fruitless errand, he shouted out on his return to camp, "I have plenty of spears now," so as to make-believe that he had really met a lot of his friends who had given him these presents. Now the fox believed him, and thinking he might possibly meet with some damage in presence of so many dangerous weapons, wouldn't let him come into his house, but kept him outside all night in the rain, and laughed at him. However, by next morning they made friends again, and went out hunting, the lizard coming home in the evening with a fine kangaroo which he had caught; the fox, having been unsuccessful, brought home nothing. The latter of course asked for some food, but the lizard lied, and told him he hadn't any, and furthermore took steps to revenge himself for having been laughed at the night before. This he did, by collecting some caterpillar-nests, which he sprinkled all over the ground in the near vicinity: he then went and ate the kangaroo all by himself. Later on, the gin belonging to the flying-fox put in an appearance with her baby crying, because its seat had got covered with sores due to the "prickles," which had come out of the caterpillar-nests. The flying-fox then came up, sat down, and asked what ailed the baby; but he hadn't long to wait for an answer, because his back also soon got sore. Thus, all the other foxes got stung with prickles, the one from the other, and so had to shift their camp from the Palmer to the Laura: indeed, their soreness got so bad that they couldn't sit down, but had to hang from the trees by the legs. And the lizard said, "Serve you right: why did you hunt me away when I wanted to get home?" (From the Koko-minni of the Palmer River.)

54. *The wallaby, the water-snake, and the parrot.*—An eagle-hawk went a-hunting one day, and brought back home a kangaroo, which he gave his two gins to cook, while he returned to the chase. The kangaroo, however, was only "gammoning"—he was no more dead than you are—and when the women went to break his legs to prepare him for the baking-oven, he jumped up, and, tampering with their honour, betook himself in all haste to the scrub again. As might be expected, unfortunate results occurred, and when the eagle-hawk came home again he was greeted by the two picaninnies who, during his absence, had appeared upon the scene. The eagle-hawk inquired whose children they were, and the gins replied "Yours!" "Oh, no!" said the hawk, "they are not like me, they are little wallabies." Thinking the matter over, however, he thought they might come in useful in assisting him to hunt other

birds. So the next day he took them out with him, and supplied each with a spear, but the very sight of them in the far distance frightened all the other birds, and it was impossible for any of them to approach near enough to strike. He got very angered over this, so, taking them over to Mount Daintree, he pointed to a hole there, and ordered them in. Once inside, he kindled a fire at the entrance, and half-charred them, thus giving these wallabies their distinctive colour. His would-be victims, however, managed to survive, became very prolific, and are now very numerous in that particular district. When, at last, the eagle-hawk got home, the gins asked him what he had done with their children, and, upon matters being explained, the one began to cry so much that a river was formed, and she became a water-snake, while the other began to chatter and growl, and so got transformed into a parrot. (*Ibid.*)

55. *The opossum and the wild cat.*—The opossum and the wild cat went away in different directions to collect seed-food. The opossum climbed a coolibar tree, got his from the pods, and on his return home was just in the act of preparing it on the mill when the cat came back empty-handed. "My word!" said the latter, when he cast eyes upon the seed that was being ground, "good fellow tucker. Where you been get him that one." Now the opossum was of course not anxious to tell whence he had obtained his supply, so he prevaricated a bit, and said, "Oh! I been get him from big rough bushes along ground." The cat, believing what he heard, broke a lot of bushes down and placed the fragments on a stone;—but of course there was no seed there, and as the opossum would not let him have any, he had to go to sleep hungry. The same thing happened next day, the opossum returning with proper coolibar seed, and the cat with the bush tops: again, in reply to inquiry, the opossum told a lie, and while he managed to get a good feed, the cat was obliged to starve. On the following morning both animals started out once more to collect food, but the cat, instead of going off in an opposite direction, watched the opportunity of his companion being out of sight, and stole the coolibar seed which the opossum had left in his wooden trough. Having duly ground, tasted, and eaten it, he said, "This more better." When the opossum arrived back at camp he saw his trough empty, and expressed his suspicions by asking "Here! you been steal tucker belong me?" "No," replied the cat, "all seed round-about belong me." After some preliminary growling they began to fight. The opossum got the worst of it and his ham-strings cut, with the result that his heel became very prominent: the cat only got his fur spotted with the seed. (Boulia District.)

56. *The porcupine and her quills.*—The original mother Porcupino had a very bad habit of staying out all night and neglecting her babies. Her excuses always were that she had been hunting for red ants, but suspicions were aroused as to her peregrinations not being of quite so innocent a nature. At any rate, she never got back till early morning, and the children suffered accordingly. It was therefore but little matter for wonder that her brothers speared her. Thus it has come to pass that porcupines nowadays always carry spears on their backs to remind them of their uncles, and of all the trouble they took in bringing their mother to a sense of duty. (From the Koko-rarmul of Princess Charlotte Bay.)

57. *Why the bat became blind* [cf. sect. 79: blindness a punishment for rape].—A very long time ago, the bat used to be of a very amorous disposition, and, getting tired of his wife the bandicoot, commenced pressing his attentions first of all upon an iguana, and then upon a frilled lizard. But these, instead of satisfying, only seemed to inflame his passions. He subsequently asked an eagle-hawk for the loan of his sister, and finally returning home, turned the bandicoot out of doors. Meeting his mother-in-law soon after, he proved himself guilty of incest, and feeling at last a bit tired and hungry, proceeded to look out for some honey. In peering up a hollow tree, he struck his eye against a projecting piece of bark, and so got his eye-sight damaged. (From the Koko-minni of the Palmer River.)

58. *The scrub-wallaby.*—This animal got its distinguishing marks—a white stripe on thighs and breast—from the fact of its having been engaged one day in digging up wild "potatoes" [*Dioscorea* sp.] with a yam-stick: the implement stuck in the tuber, and spilt the white pulpy matter on the parts indicated. (From the Koko-warra of Princess Charlotte Bay.)

59. *The rat, the kangaroo, and the yams.*—Many years ago, at Lakefield, it was the large kangaroo who used to make the yams. He was thus engaged one day when a little kangaroo-rat came suddenly past him, giving him such a surprise that he dropped the vegetables into the ground. Of course the kangaroo was determined upon chastising his interrupter, but the rat cleared away into the ground, took the yams with him, and burrowed along as far as Breeza, a distance sufficiently great to allow of him showing himself in safety. The rats and yams are very plentiful now at Breeza. (*Ibid.*)

60. *How the native bear lost his tail.*—The native bear and the whip-tail kangaroo were "cousins" some considerable time ago. They were very much alike in colour, and, in those days, each was the proud possessor of a tail. It chanced one day, during the very hot weather, that they both got a bit thirsty, and arriving at a neighbouring creek, discovered to their dismay that it had run dry. They thereupon started digging in the sand, and water began to collect in the excavation made. As the bear dipped his head down in eagerness for a drink, the kangaroo cut his tail off, and that is why he has never had one since. (From the Tarumbal of Rockhampton.)

61. *Animals and birds were once blacks.*—There is undoubtedly a belief of this description throughout the northern districts generally, so much so that when a native wishes to speak of the earliest conceivable eras, he usually expresses himself somewhat in the form of "When the animals and birds were all black-fellows."

62. *Origin of Man.* *The first aboriginals* [cf. sect. 61, 82].—In the beginning Anjir [cf. Anje-a, sect. 83] was lying in the shadow of a thickly-leaved tree. He was a blackfellow with very large buttocks, but peculiar in that there was no sign of any orifice. Yalpan happened to be passing by at the time, and noticing this anomaly, made a cut in the usual place by means of a piece of quartz-crystal, with the result that the evacuations were expelled and spread over the surface of the ground. All blacks were thus originally born from Anjir's dung. Yalpan went southwards, and has never been heard of since. Anjir was buried underground after he had "breeded"—the interpreter's expression—all he wanted to. (From the Koko-warra of Princess Charlotte Bay.)

It was out of the local river whence men and women originally sprang, but on their first appearance there was no specialisation or differentiation of sex: the stiff spear-grass gave the males their distinctive attribute while the two labia majora remind the girls of their early peregrinations along the two river-banks. (Tully River.)

The moon (kakara) made the first man and woman, the former out of the same stone used for manufacturing tomahawks, the latter out of box-tree. The man was completed by rubbing him all over with white and black ashes, and placing in his inside a stick of pandanus-root, which, when required, can be brought into prominence. The woman was rendered supple and soft by rubbing her with yams and mud: a ripe pandanus fruit was enclosed in her belly to produce her courses: to finish her distinctive features she was slit up with the sharp edge of a flat mangrove-root. (Proserpine River.)

63. White-coloured people.—[The following can hardly be accounted a superstition, in the sense of its being believed and accepted by the tribe in general: it is more of a story, and introduced here only for convenience.] Somewhere about the time that my informant's grandfather was a very little boy, an aboriginal was hunting out in the bush, and beginning to feel hot and thirsty came down to the edge of a lagoon to quench his thirst. The water being so refreshing, he thought he would have a swim, and he dived in. Now, stretching across this lagoon was a big brown snake, so big indeed that while its head was resting on the one bank, its tail was lying on the opposite. But the black-boy never noticed the animal, because he was so intent enjoying himself in the cooling water, with the result that the snake seized him by the scruff of the neck and swallowed him whole. And there he remained in the serpent's belly. The snake crawled about from lagoon to lagoon, when, at the end of three or four days, he emerged on to dry land to ease his bowels. His guest thus got expelled, and rushed home to camp as fast as his legs could carry him, but when he put in an appearance there, with a white complexion, his parents of course did not recognise him. So he had to explain matters: "You father belong me. You mother belong me. Me been inside snake. Lose him skin. Me white-fellow now." (Pennefather River.)

Unfortunately it is impossible to speak with certainty as to the impression conveyed to the aboriginals on their first contact with Europeans. Judging from such accounts as are available, given us by the early explorers, there is reason for believing that no small amount of interest was aroused in satisfying their curiosity as to whether the white man was sexually like themselves. James Murrelle (*Narrative, etc.*, 1896 Edition, p. 18) says that the natives "kept up a constant yabber amongst themselves, which led to a more minute examination of our person, this time evidently to ascertain our sex, which seemed necessary on account of our being clothed. The captain's wife naturally shrank from such scrutiny, but they persisted, and when they found we were like themselves—male and female—they seemed satisfied and did not further molest us." Leichhardt (*Journal of an Overland Expedition*, p. 246) was even asked by the Burdekin blacks whether the bullocks were not his gins. Tradition has it among the Cape Bedford blacks that when Europeans were first seen they were called, from their appearance, Bera-ngobadi, the name given to a light-coloured species of shark. It was only when they were recognised as beings like themselves, that they were called Ganggal-naka-waraigo (*i.e.*, baby—east—motion through) as indicative of their coming in ships from the east, where they were presumably born. Occasionally these same aboriginals call a European a Nima-ga (*i.e.*, grave—obtained or received from) probably from the fact of the latter being believed to possess the spirit, etc. (sect. 67), of one of their deceased. [Curiously enough, the Adelaide blacks, according to Teichelmann and Schürmann (*Outlines of a Grammar, etc.*, 1840, p. 39), used the same word "pindi" to express a European, and a grave—apparently for similar reasons.] It is admitted by the Pennefather River natives that when their people first came into contact with the whites, they believed that they had in them the ngai or spirits, etc. (sect. 68), of their dead relatives, and accordingly named them Kai-worda-ngai (*i.e.*, bark-sap-spirit), the nearest approach which they could get to an accurate description of the colour being the sap side of the bark, which is always of a lighter hue. As time wore on they learnt, however, that their visitors had nothing to do with the ngai, which suffix was consequently dropped, and the term Kai-worda used by itself as at present.

64. Suggested explanation of the 'black jump-up white-fellow' idea.—There are undoubtedly traces here and there of a belief that the spirits, etc., of deceased blacks may enter the bodies of Europeans (sect. 67) in the same way that they may occupy the haunts which they frequented in life (common idea everywhere), or be actually re-born from father to son, etc. (sect. 68). The idea prevalent, however, among Europeans of a more or less universal belief held by the natives that when they die they actually "jump-up white-fellow" is as absurd as it is wide of the truth. The accounts given by Durrumboy (Davies, the runaway convict) and others to explain the hospitality and friendship with which they were greeted when they first joined the wild blacks, are equally explicable and more in consonance with what we now know of native superstitions and beliefs on the supposition that the explanations offered them by the aboriginals were misunderstood: that instead of a return of the deceased native's actual body after death in the form of a European, the meaning intended to be conveyed was that the vital principle (spirit, etc.) is re-incarnated in the white man. We can hardly expect these early observers to have recognised this fine but, from an anthropological point of view, important distinction. As bearing upon this line of argument I would point out that in many of the North Queensland dialects which I have personally recorded, the same word is found to do duty for a European and a deceased aboriginal's spirit, ghost, etc.: thus—

Bloomfield River (KYE), winggul (*or* wu-inggul), topo.

Atherton (CHI), Cairns, etc. (YID), Ko-i.

Cloncurry (MIT), parago [also signifies a corpse].

Selwyn Ranges, etc. (KAL), yanyi.

Princess Charlotte Bay, (KRA) mo-olonga, (KWA) gi-urr, (Koko-olkulo) angara.

Cape Bedford, Cooktown, etc. (KYI), malul, wangan.

Tully River (MAL), Koi, Ku-inggan. [These terms signify respectively male and female deceased spirits, and male and female Europeans.]

65. The Vital Principle: Spirit, Soul, etc.—On the *Tully River*, this is associated both with the shadow (sect. 27) and with the breath. It goes away during sleep, fainting-fits, etc., and returns when the person awakes or recovers. It is of no tangible substance ("no bones" is the local description), and can be heard only at nights. Thus, for upwards of some days after it has taken its departure from the body, it can be heard tapping on the tops of their huts, creaking on neighbouring branches, etc. Every man has his own Koi, every woman her own Ku-inggan—one for each, and good or bad accordingly (sect. 72). After death, these can return to their old homes and friends. The Koi etc., finally goes away into the solitudes of the scrub, where it can be met with everywhere; but it does not inhabit or become associated with any particular tree, clump of trees, cluster of rocks, cave, or stone, nor does it necessarily particularly haunt the burial-ground or the locality where its late body was cremated. It is everlasting, so far as the blacks have any conception of the term, but, owing to the absence of tangible substance, requires no food, and hence no victuals are put aside or prepared for it. Koi (or Ku-inggan) is good or evil, according to the disposition of the individual whence it has been released. But if a man is alone by himself, day or night, the Koi of even one of his deceased relatives may come and do him harm. On the other hand, if it is seen or heard by several blacks together no harm arises, for it cannot injure the whole lot at once. Indeed, these natives are always taught, or, rather, have impressed upon them from childhood up, the many disadvantages to which an individual, when alone, renders himself continually liable at the instance of these spirits (sect. 150). Good fires are the only means these aboriginals have for keeping Koi away. Pitcharu has already been referred to (sect. 8) as the spirit of a deceased enemy, who brings his fire-stick or falling star with him, and is supposed to be in hiding anywhere in the denser scrubs. He has been heard cracking twigs and boughs, and seen both night and day; but should the individual gazing at him unfortunately be alone, he or she will get sick at the sight, may develop serious symptoms a few days later, and possibly die as the result. Certain of the older blacks will claim to have killed some of these pitcharu.

Animals and plants are not regarded as having any Koi, etc.

66. The Bloomfield River natives have an idea of "something" being associated with the breath or Wau-wu: that when a black dies, is unconscious, or delirious, etc., his wau-wu—and in this expression they apparently include his will, and thinking powers—leaves the body and travels about. After an individual's decease, apparitions of him may be seen by the survivors, and such a ghost or spiritual representation is called Wu-inggul, Winggul or Topo, but this, curiously enough, is apparently independent of the wau-wu (K. Hislop). Wu-inggul haunts its late home and present burial place where it can both be seen and heard, especially at night when the branches creak or whenever any sound, which cannot be otherwise accounted for, is rendered audible. Dogs are reckoned upon having thinking powers, etc., or wau-wu, and bear a sort of relationship to their masters, who will often speak of them as their mother, son, brother, etc., in addition to mentioning them by their proper names, these being conferred on them according to the districts whence they have been obtained, or to the various tracts of country occupied by their owners. When talking about any live or dead shrub or food-plant, the Bloomfield blacks employ the same terms as are used to denote a live or dead individual, but they do not ascribe any breath, thinking- or will- power to it.

67. At Cape Bedford.—The belief is fixed in a certain vital principle or Wau-wu, associated with the breath, but differing from the "something" to which a similar term is applied on the Bloomfield, in that it is part and parcel of the deceased's ghost or spiritual representation. This wau-wu is within the human body, both sleeping and waking, and only leaves it when death occurs: it may hover around its burial place for a time, and may be seen by and communicate with the living. Thus it often shows itself to one of the deceased's blood-relatives or intimate friends, to tell him who it was that sent him out of this life, and to ask for revenge. Again, if a man is travelling all alone, the wau-wu perhaps of his father or some friend bears him company to protect him from an ambuscade: he may probably see nothing, but his spiritual guide warns him to hide, and let his enemy pass by. It may, however, come with hostile intent, and make a person wu-tchi (sect. 116). When wau-wu finally ceases visiting its late owner's grave, it travels in the direction of the east, and enters a white person: these blacks will often look for a resemblance to some deceased tribesman amongst the Europeans, and often wonder how and why it is that we have forgotten all about our aboriginal ancestors (sect. 63). Nature-spirits (Manyá) all come under the same category as wau-wu, in that they are originally derived from people deceased, and usually only leave their haunts in the forests and caves at night. The old men who are not afraid can both see and even speak, but not destroy them (as in the local burial ceremony): they can also converse with them, and be warned by them of various dangers: but women and children are afraid, and never see them. It is interesting to note that the lower animals also possess wau-wu: for instance, if an individual happens to beat a dog—dogs have human names here—more unmercifully than usual, it is of common occurrence to hear a comrade say something to the following effect:—"Look out! you are thrashing him as if he had no wau-wu." Plants are not recognised as having any life or consciousness.

Having had the opportunity of making a careful study of the language spoken by these Cape Bedford natives, I am in a position to give some further particulars of the meaning of this word Wau-wu: the second w is hardly pronounced at all. Originally, it signifies the breath, and I cannot refrain from surmising that it is onomatopœic, the two syllables representing inspiration and expiration respectively. [At Cape Grafton, it is called wai-wai: at Mapoon am-wó-o.] From this meaning of the breath, is derived the idea of the non-tangible "something" contained within the body, and so the notion of the inside (space) of anything, such as a hut or a dilly-bag. The word is also used in composition, the meanings of the terms suffixed being given in brackets, as follows:—

- Wauwu-dir (with) = with all my "heart," hopefully.
- „ -mul (without) = lost "heart," despair.
- „ -błeni (to die) = dead beat and tired, (and so) thirsty.
- „ -kulbalbal (?—) = to sigh.
- „ -wointchor (to fan, start a breeze) = a gust of wind.

68. On the *Pennefather River* the vital principle, etc., the Ngai and Cho-i are not connected with the breath but with the heart and after-birth. This ngai, which the blacks can feel palpitating, talks to them, and tells them when it is hungry or thirsty or wants to rest: it can even talk to them during sleep and thus causes dreams. It has nothing to do with the breath or Wanji (a term also applied to a gust of wind), which leaves the body first: it is only some time after death that the ngai takes its departure from the corpse, and if a male, passes into his children, both boys and girls, equally. Indeed, not until a person's father dies, does he or she possess a ngai: if the child dies before its father, it never has one: in the case of a female who might possess one it passes at her death from sister to sister, and when no more of these relatives are left to receive it, it goes "along mangrove, finish altogether." Again, not only does ngai separate from the body after death, but also during fainting-fits (e.g., those produced by collapse, loss of blood, etc.) and other forms of unconsciousness: to cure a fainting-fit, etc., the friends around will start stamping with their feet to get ngai back again, just as they do with similar purpose in the case of a corpse (sect. 70). On the other hand, from the time when Anje-a puts him or her into the mother's womb (sect. 83) everybody possesses a cho-i, which occupies the same quarters and has similar subjective sensations as the ngai: it differs, however, from the latter in that a portion of it stays in the after-birth, the remainder leaving the corpse at death to wander about for ever in the bush. Freed thus at death from its connexion with the body it can be sometimes seen, often heard, and certainly smelt. If interrogated as to the appearance or qualities of a cho-i, the natives will refer to their shadows which, though called by another name, constitute the nearest approach they can get to rendering themselves intelligible. When the medicine-men go away for a spell in the bush, they are believed to talk to these cho-i, with whose assistance they are supposed to control people's lives (sect. 117): it should be borne in mind that these wandering cho-i (i.e., those portions of them which were not left in the after-births) are all mischief-makers and evil-doers in that they can make a person sick, or even "cranky." And though these cho-i usually wander somewhere in the bush, there are certain hollow trees, particular clumps, and others with unusually widespread branches, etc., which they are believed more or less specially to haunt: thus at night, when the leaves are rustling, or the branches crackling, they can be heard. Furthermore, the presence of a cho-i can be recognised, day or night, by the nose. During one of my periodic visits to Mapoon, I was afforded a curious illustration of this. A few days after the death of a woman in one of the huts, and after removal of the body, the Rev. N. Hey happened to be dressing with carbolic (in the same apartment) the wounds of a little boy who had suffered some trivial injuries, and in the course of his friendly offices spilt some of the acid on the floor: that same night the occupants were terrorised by the deceased's cho-i which they knew was present by the smell. But to return. It has been stated that portion of the cho-i which Anje-a originally puts into the baby remains in its after-birth (NGG.lepre-e). Now, when the child is born into the world, the grandmother takes the after-birth away, and buries it in the sand, marking the situation by a number of twigs stuck in the ground in more or less of a circle, and tied together at their tops forming a structure resembling in shape a cone. Anje-a comes along, recognises the spot, and taking the cho-i out carries it to one of his haunts where he places it, and where it may remain for years, in a hole in the rocks, in a tree, or in a lagoon. Three or four such haunts are known in the neighbourhood of Mapoon—one at Tullanaringa (Cullen Point) along the calcareous sandstone rocks (Figs. 3, 4)* on that portion of the beach known as Baru, another among the rocks at Trokanguno (the junction of the Batavia and Ducie Rivers), a third among the timber along the mangrove-swamps at Lalla (towards the south-east of the mission station), and a fourth in one of the fresh-water lagoons at the back. Now, when Anje-a actually makes the mud-baby (sect. 83), which he inserts in the mother, he puts in it a bit of the cho-i of its father if a boy, but that of its father's sister if a girl: when he makes the next little brother or sister, he puts another bit in, and so on. And although the parents know whose cho-i their offspring possesses—whether its father's or its father's sister's—they are as yet ignorant of the particular spot where it has all these years been imprisoned, and whence it was finally released and put in the child's body by Anje-a. This information is obtained as follows:—When the navel-string is cut by the grandmother (with a kangaroo-tooth, etc.) the different haunts of Anje-a are called out, and the name mentioned at the moment of breaking tells them whence the cho-i was brought. [The navel-string curiously enough has two names here: ailinyi for the portion left on the child, and anombite for that remaining on the after-birth.] The child's own country, its "home," where it will in the future have the right to hunt and roam, is thus determined, not by the place of actual birth, but by the locality where its cho-i had been held captive—situations which may sometimes be many miles apart. Hence a baby is sometimes spoken of as a Ko (tree)-, Akworra (rock, stone, etc.)-, or Ngc-i (fresh water)- manu (obtained or received from)- agamo (young infant). When an individual is finally dead, i.e., has no cho-i or ngai, the corpse as a piece of putrefying matter, "all finish," is known as Pau-uto, Kojuro, or Ji-o. Animals and plants have neither ngai nor cho-i.

69a. An almost identical belief is met with on the eastern coast among the *Proserpine River* blacks, with their Mogari and Kuya, both in location and destination corresponding respectively to the ngai and cho-i of the *Pennefather*. On the death of a father, the mogari passes into the children direct: on the death of a woman, it passes into her husband if she has one, or else into her sisters, and then "finish." When the nature-spirit Kunya (sect. 83) makes the baby out of the pandanus root, he puts in it a piece of the kuya obtained from the after-birth of its reputed human father: on the *Pennefather* a distinction is made between the boy and the girl, the cho-i being taken from that of the father in the former case, but from that of the father's sister in the latter. When the after-birth is buried, the kuya may either remain there, or be carried to certain places in the rocks until such time as Kunya fetches it for insertion in the pandanus baby. Both mogari and kuya leave the body during fainting-fits and sleep, and if they belong to elderly people may do evil: they can also be both seen sometimes, but only by very old men. Breath (Ngato) leaves the body at death, and is "no more."

69b. At *Cape Grafton* I could not obtain much information from the very few old hands that are left: the Wai-wai or breath (which is already in the child when brought by the pigeon to the human mother—sect. 81) as well as the Mulkal which subsequently becomes inserted in the heart (? liver) appear to be both closely associated with the vital principle. A person develops a Mulkal only by eating a piece of any human flesh (friend or foe) within two days after death.

* Professor Spencer tells me that these figures are strongly suggestive of the spots haunted by spirit children in the Central Australian tribes.

69c. In the *Boulia district* the spirit, ghost, etc., of the deceased haunts the place of burial, and is known as Moma. The survivors generally go in parties to the grave for the purpose of leaving food, etc., being afraid to go singly on the chance of seeing it. This Moma can also initiate an individual into the mysteries of the craft of medicine-men.

70. Intelligence, Consciousness, Memory, etc.—Throughout North Queensland, the ear is believed to be the seat of intelligence, etc., through or by means of which the impressions from the outer world are conveyed to the inner. Compare "He that hath ears to hear, let him hear," etc., used prefatory to any important statement in the Scriptures.

In the Koko-yimdir language of Cape Bedford, Cooktown, etc. (Roth: Bulletin No. 2, p. 7) I inquired into this idea from a philological point of view. The word for ear is milka, from which by means of suffixes (meanings expressed in brackets), the following compounds are derived:—

- milka-mul (without) = stupid.
- „ -dir (with) = intelligent, obedient.
- „ -ngamba (closed) = won't hear, obstinate.
- „ -ngandal (to refuse) = to forget.
- „ -namalma (to see) = to remember, hear, think.
- „ -ninggal (to sit) = to listen.
- „ -bakal (to dig) = to persuade. Compare our expression "To drum into one's ears."
- „ -bantchir (hard) = obstinate, mad.
- „ -bandandaya (to break open) = ears closed before but opened now, *i.e.*, to turn over a new leaf, to amend.
- „ -ugudo-ngudo (a reduplicated form of play, recreation) = mind set on playing, *i.e.*, playful.
- „ -n (euphonic)- yiwara (to look for, but not necessarily to find) = to forget.
- „ -dundal (to soften) = home-sick.
- „ -warra (bad)- mal (to become) = to crave for home, home-sick.

In the Nggerikudi dialect of the Pennefather River the term Wo-a (ear)- poru (good) signifies a clever, intelligent person.

Amongst the Kia aboriginals of the Proserpine River, the word Wallu (ear)- kuta (closed) means a foolish individual, and Wallu-imbana (open) a clever one.

The Mallanpara blacks on the Tully River furnish the following:—Wallu (ear)- batchun (large in quantity as well as quality) indicates an intelligent, obedient individual; Wallu-purmo (deaf) signifies a disobedient one, and Wallu-purmo-purmo a very cranky, foolish person.

At Boulia, the Pitta-Pitta aboriginals have the word Narra (ear)- punga (? —) signifying "to forget." Furthermore, in the gesture-language employed by the last-mentioned blacks, the sign for forgetfulness, loss of memory, etc., is the picking at the centre or lobe of the ear with the thumb and forefinger: the idea of bringing forth that which was originally put into it. The same sign and meaning is met with, in addition, at Cloncurry, Winton, and Hughenden; at Cape Bedford, on the east coast, it has a slight variation, in that the forefinger is plugged into the ear and dragged vertically out. At Cape Bedford, also, there is a gesture indicative of knavery, foolery, etc., represented by a tapping of the ear with the extended forefinger: he won't listen to reason, *i.e.*, hearing.

Another curious example comes from the Tully River, in the days of early settlement there. Mr. Brookes, senr., would often send his son a message scribbled on a piece of paper or board, and instruct his blacks to deliver it. When the latter saw that the boy could understand what had been brought him, they would look at the board, etc., from the front, then behind it, and finally put it up to their ears to see if they could understand anything by that method.

[The stamping of the feet round a person fainting, or a dead body, on the Pennefather River (sect. 68), or the shouting at the corpse at Macdonnell, may have a similar signification: it being in the ears that consciousness, intelligence, etc., is believed to lie. So, again, Mr. Petrie tells me that amongst the old Brisbane blacks, in cases of fainting-fits, *in articulo mortis*, whenever, in fact, the patient was unconscious, some person would bang his ears between the open hands, and shout into them all the time, with the alleged object of making the invalid hear.]

71. Individual Names. *Pet-names may be given by augury. Boys' names may indicate peculiarities in the father.*—At Princess Charlotte Bay, Cape Bedford, on the Proserpine River, etc., the choice of an infant's pet-name depends upon augury. The mother's mother, or other old female takes a small portion of the navel-string, with after-birth attached, and keeps shaking it pretty violently while the other old women sitting around call out proposed names one after the other: the moment the string breaks, the name which was then called is chosen. From the fact, however, at the Cape, of the same names occurring in the same family, there is every reason for believing that there is some collusion when the navel-string becomes finally torn. On the Bloomfield, certain of the women will come round the child soon after its birth, talk to it somewhat as follows:—"Your name is the same as mine, isn't it, dear?" and accept the kicking of a leg, the turning of the head, a gurgling in the throat—in fact, anything on the part of the infant as a sign or token of affirmation. The name thus given to a child is either that of an animal, plant, locality, or that of some relative (a name already known, but the meaning of which, in many cases, has been lost). Tully River girls are never named after snakes, fish, or crocodiles. There is no necessarily connecting dependence—though I am prepared to admit the possibility of its having once existed—between the child and its name-sake animal, or plant, which in different districts may or may not be destroyed and eaten by it. As a general rule, in the case of girls (and the same holds good with the Cape Bedford boys) the child is thus known throughout life until the decease of a name-sake takes place, but even then exceptions are to be recorded (*e.g.*, on the Tully River—sect. 72).

With boys on the other hand, as soon as they begin to toddle, or feel their way a bit in the world, it is usual for another name to be given them by the father or his side of the family, indicative of some peculiarity, accident, locality, etc., connected with the boy himself (Bloomfield, etc.), or with the father. Curious examples of the latter have been met with at Cape Grafton, where names such as Leg-shark (*i.e.*, extremity bitten by a shark), Foot-heavy, Knee-Sick, Speech-Gentle, all bear reference to the male parent. On the Pennefather River all the sons bear the same name as the father: it runs right through.

72. Causes upon which changes of name depend. Names of deceased people, etc.—As the individual goes through life, changes in name may take place at the initiation ceremony (Cape Grafton, etc.), upon the occurrence of some important event happening to him (*e.g.*, Broken-Mouth in reference to a boy at Cardwell whose lower jaw had been shot away by the police), on the discovery that he can control or influence some particular talisman or charm, on his recovery from a sickness, with the progress of old age, and upon the decease of a name-sake. If, for instance (on the Tully), he believes that he can control some peculiar amulet, etc., he will call himself by that name, but does not discard his original one: his friends will recognise both. Chulo-koi (*i.e.*, Thigh-weak) was the old man who could cause mosquitoes to put in an appearance (*cf.* sect. 112) by carrying out certain practices at a spot in the neighbourhood of the mouth of the Hull River: when absent on this errand he was always spoken of as Di-u (mosquito). In the same district, again, when an individual is sick or recovering from illness, it would be a great insult to call him by his ordinary personal name: he must be addressed as Marki, *i.e.*, the thin one. Here also, and occasionally elsewhere, when a man gets very old and bald, he is spoken of, and spoken to, as "Baldy" (MAL. chalkai.) It should be borne in mind that the practice of altering the individual name on the decease of a namesake is not universal: for instance, it is certainly not changed under the circumstances amongst the Mallanpara (scrub blacks) of the Tully River, with this limitation, however, that when such a name is uttered in reference to a person deceased, it is spoken of by whisper only. Of course, the prohibition of the name of a dead person is not permanent, though it may extend over many years, and accordingly, as in the Koko-warra etc., the names of deceased relatives may be found given to children. [When on the Endeavour River in 1770, Lieutenant Cook describes the name of one of the natives as Yaparico: this family name still exists at Cape Bedford under the guise of Yaborego, and is derived from a particular spot in the neighbourhood of Cape Flattery.] On the Bloomfield, when a name-sake dies, the survivor—he or she—is called Tanyu (a word of unknown meaning), or else by some name bearing reference to the corpse, prefixed with Wau- (*cf.* wau-wu, the breath etc.): thus, we have Wau-bantcha (locality where body was buried), Wau-wotchinyu (burnt, in reference to its cremation), etc. But there may often be in the camp several Tanyu, Wau-bantcha, Wau-wotchinyu, etc., and to distinguish particular individuals recourse is had in the usual fashion to the mother's, etc., name, though this woman herself may have been long dead and gone. For instance, if in the course of conversation a man's name is mentioned but not known, reference is then made to his mother's name, *e.g.*, Ngamu-mulun (Mother-quandong), and if that also is not recognisable to his paternal grandmother's name, though both these women may be deceased. In those cases where I have obtained a reason why the name of a dead person is not mentioned it has invariably been that the spiritual representation, ghost, etc., thus called upon might return to the neighbourhood and cause mischief. A somewhat analogous idea is observable in the superstition whereby certain individuals named after Rain can call upon their name-sake to put in an appearance (sect. 16). When one recognises the fact that almost all accidents and diseases which can possibly befall mankind are due either to spirits of people deceased (sect. 116), or to nature-spirits (which are derived from spirits of people deceased—sect. 115), or to medicine-men whose initiation and calling are so intimately connected with both, this dread of mentioning the name of a deceased person becomes intelligible. Furthermore, the vast amount of superstition and sorcery which surrounds the savage on every side naturally engrains in him powerful ideas of suspicion and distrust, and the better they are developed, the greater are his chances of counter-acting this witch-craft and travelling along life's journey in comparative safety. It is quite true that the influence for good or for evil of some of these spirits may depend upon the bodies whence they were originally derived (sect. 65 *et seq.*, 74, etc.). But would not the native, if a spirit, take the same advantage over others in the flesh, as he while living firmly believes can be taken by spirits etc. over him? Would he not at heart trust even his friend still less when deceased than he would when alive? Safe probably in the knowledge that a woman while in the flesh possesses but little power to do him harm, the aboriginal has no compunction in mentioning if necessary her name (when deceased), in the usual manner above referred to, when wishing to differentiate a particular individual.

There is a local curiosity in the way of avoidance of names on the Bloomfield River, where the male blacks never speak by name to or of their Pi-wal (the individual who bores the nasal septum).

73. Endearment terms.—On the Tully River, among the Mallanpara, the four primary group-divisions have a peculiarity attached to them, which so far I have noted nowhere else, and the interpretation of which I have not been able to ascertain. This consists of special terms of endearment applied in ordinary conversation by and to the males and females of each, particularly in the case of old men, young children, and friends: they may be noted, as follows:—

(Primary division.)		(Male members.)		(Female members.)
kurongon	...	mularamo	...	murkoi-an
chikun	...	ol-meri	...	ma-ngani
karavanji	...	yauwinya	...	pinkunya
kurkillla	...	orakaja	...	manji.

74. Calling upon name-sakes, etc., before going to sleep, etc.—On the Tully River, also, whenever a man (or woman) lies down and stretches himself for a spell, or on going to sleep, or on arising of a morning, he mentions in more or less of an undertone, the name of the animal, etc., after which he is called, or belonging to his group-division, prefixing it with wintcha? wintcha? (= where? where?). If there is any particular noise, cry, or call connected with such name, he may mimic it. The objects aimed at in carrying out this practice, which is taught by the elders to the youngsters as soon as they are

considered old enough to learn such things, are that they may be lucky and skilful in hunting, and be given full warning as to any danger which might otherwise befall them from the animal, etc., after which they are named. If a man, named after a fish, thus regularly calls upon it, he will be successful in catching plenty on some future occasion should he be hungry. If an individual neglects to call the thunder, rain, etc., provided of course they are his name-sakes, he will lose the power of making them. Snakes, alligators, etc., will never interfere with their name-sakes, provided they are thus always called upon, without giving a warning—a "something" which the aboriginal feels in his belly, a tingling in his thighs or legs, etc. If the individual neglects to do so, it is his own fault that he is bitten or caught (sect. 150). This calling upon name-sakes is not supposed to benefit the women very much. If people were to call upon others than their name-sakes, under the circumstances above mentioned, it would bear no results either for good or harm.

A similar practice prevails on the Proserpine River, where the native, before going to sleep, calls upon one or other of the names of the animals, plants, or other objects connected with his particular primary group-division, thus:—

Kurchilla: rain-bow, opossum, ground-iguana, frilled lizard.

Kupuru: stinging-tree, emu, eel, turtle.

Banbari: honey, sting-ray, bandicoot, eagle-hawk.

Wungko: wind, rain, brown-snake, carpet-snake.

In reply to inquiries, the reason given me is that when called upon they warn the people, who have summoned them, of the advent of other animals, etc, during sleep.

75. The Human Body.—*Teeth* get rotten and fall out in old age, because of a certain grub which the natives are very fond of eating. This caterpillar grows and burrows in decayed logs, and getting into the blacks' teeth does the same damage there as it does in the timber. When I asked why they did not therefore give up eating this particular food, the aboriginals expressed themselves to the effect that they had too great a craving for it to deny themselves. The falling out of the teeth in old age is called by the same name as that for tooth-ache. Milk-teeth, when they drop out, are buried in the growing bud, or at the butt, of the *Cordyline terminalis*; were this not done, no more teeth would come. (Tully River.)

Children's teeth, when they fall out, are put into the growing shoot of a *Pandanus* tree by their mothers; older boys will bury theirs in the ground. Were this custom neglected, they would get no others. (Pennefather River.)

As the child's milk-teeth fall out, each one as it comes away is given to the father or mother who buries it under a *Barringtonia racemosa*, where the grandparents are supposed to look for it. Sometimes the children themselves bury the teeth under the same species of tree. If attention were not to be paid to this matter, the grandparents would not provide them with new ones, as they are asked and supposed to do. (Bloomfield River.)

In order that the child may ultimately get a second set, the milk-teeth as they fall out are given to its father or mother who throws them away in the direction where it was born: here they are picked up by a species of large kangaroo, who preserves them by sticking them into a lump of bees' wax, to return them finally as required. (Proserpine River.)

76. Want of pigmentation of the hands or feet is ascribed to the person having at some time or another eaten certain foods forbidden him (Pennefather River): to having picked up splinters from a tree struck by lightning (sect. 10), etc.

77. Hair of young infants is allowed to grow to a length of 3 inches or so, but if the slightest tendency to falling out shows itself the hair is divided up into thorns like a mop-broom, each thorn being fixed up with a piece of bees' wax at its extremity: unless thus taken care of, the child is certain to become bald when older. Some time after the child is able to walk by itself, its hair is cut off with a quartz-crystal and made into string; this is worn either by the mother or grandmother, or else tied round the youngster to support its prominent abdomen. When care is bestowed on these details, the grandparents will provide new and luxurious hair. (Bloomfield River.)

Young men can make their whiskers grow quickly by rubbing over the surface the teeth from a carpet- or black-snake. (Proserpine River.)

When cut, hair has to be buried in swamp-mud, *i.e.*, where there is fresh water, and if this precaution is neglected it will not grow again (Pennefather River). Elsewhere, if burnt, heavy rains are sure to follow (sect. 22), the individual may become sick (sect. 130), etc. On the other hand, the Proserpine River natives purposely burn a woman's hair after cutting because, if accidentally or wilfully it should ever get into a man's dilly-bag, the owner would become ill (sect. 131).

Long, long ago, at Cape Bedford, it was the women, not the men, who sported beards: as such an appendage, however, was not considered becoming to the gentler sex, it was taken from them and given to the men by the Nguta-Nguta (sect. 82).

[The hair is not allowed to be cut during the progress of certain of the burial rites.]

78. Dumbness.—On the Batavia, Pennefather, and Embley Rivers, and at the Moreton, for the two or three months that he is engaged in eating certain portions of his deceased brother-in-law, an individual loses the power of speech, and expresses himself only by signs. Mention will be again made of this peculiarity when dealing with burial customs.

79. Eyes, Blindness.—If, on the Bloomfield River, a person have sore eyes, this affliction is considered due to his or her having cut down the upper branches of certain trees wherein a special kind of honey is found, and which has been made "tabu." The complaint may also be ascribed here to urine (sect. 80) having been burnt.

The development of blindness in the Boulia district, when not explicable by visible traumatic causes, is in the case of men accounted for as a punishment, by human agency, for continued persistency in raping married women when alone and unprotected out in the bush. This punishment of blindness, PPT. *mi-pakkuria* (cf. *mi* = eye, *pakka* = to cut) can be inflicted by anyone except a woman. The individual whose wife's honour has been sullied gets two of the incisor teeth of a young opossum and ties them with twine, derived from the same animal, one to each of his little fingers, on their inner aspects. So prepared, he comes into camp and squats down with the chin resting on his closed hands, taking up such a position as to admit of his getting a good view of the delinquent without exciting any suspicion. He watches his opportunity of getting into line with the offender's eyes and, without being noticed of course, stretches forward in the required direction with both his hands, one on a higher level than the other, and with the little fingers (all the other digits remaining closed) claws into the air at one eye (Fig. 5): after a few second's interval he shifts the position of his hands, the one which was on a higher level before being now lower, and "makes for" the other eye with a similar clawing. The opossum teeth and string are subsequently destroyed by fire. The result is that, although the culprit is totally unconscious of what has been done to his visual organs, his eye-sight becomes affected, he gets quite and incurably blind, and can see no more women to assault. A similar purport of the infliction of blindness is met with in the Palmer district (sect. 57).

When the Maitakudi want to "blind" a man, they do it by "singing" only (Cloncurry): the Pennefather and other blacks get the same results with a talisman or charm (sect. 136, etc.), while the Proserpine natives effect their purpose by putting the ashes of a burnt human bone upon the sleeper's eye-lids.

80. Perspiration, Urine, Excrement.—On the Pennefather River, sweat from under the arm-pits is used only by a father in welcoming or farewelling his children, whose faces and chests he smears with it. He will do it to his son both when single or married, but to his daughter in childhood's years only. In the days before the advent of the missionaries at Mapoon, when the bodies used to be buried nude, the father would similarly smear his deceased progeny before being finally covered up with earth. In the North-Western districts (sect. 160), sweat similarly derived from the arm-pits is believed to possess powerful curative properties, especially when the patient is in extremis: while on the Bloomfield (sect. 13) it has the effect of influencing the direction of a storm.

On the Proserpine River, an individual can be made very ill by touching his food (e.g., honey, opossum) with the sweat obtained from the arm-pits, crutch, or preputium (sect. 131).

On the Tully River, if a gin has had connexion with a boy, the perspiration from under the arm-pits of the latter can be smelt on her: and for such an alleged *faux pas* she often has to pay the penalty. Axillary sweat is known here as *ngamurai* (same name as the axillary hair) to distinguish it from *churupul*, the sweat obtained from the fork and elsewhere over the body: it is stated that the stronger-scented the *ngamurai*, the more attractive is it to a woman (sect. 84).

Great care is taken never to make a fire where a person has been micturating, for if an individual's urine is burnt it will produce bad eyes in the owner and in other persons (Bloomfield River), or sores on the privates (Cape Bedford, where venereal disease may thus be accounted for). During the summer of 1898, I happened to be in the Cape Bedford mission garden, when one of the camp-women's children micturated upon a piece of log which was just about to be burnt: the men who were working in close vicinity, noticed it, and immediately informed the mother, who, together with them, took care to scrape the wood perfectly clean and dry. On the Bloomfield River, urine may be used as a lotion (sect. 160).

[Tully River men and women will micturate over themselves in cold weather to keep themselves warm: elsewhere, they will often micturate over their hands for ordinary cleansing purposes.]

In the case of young children, up to the time of their being able to walk, their faeces and any grass or pebble, etc., upon which they may have dropped, are put into the fork of some convenient branch of a neighbouring tree: the idea prevalent is that if a dog were to get at the evacuations, the child would become unhealthy, and would require a much longer time than ordinary before it could learn to walk properly (Bloomfield River). A similar practice is in vogue on the Tully River where the reasons for it are stated as being that on the one hand the child will grow strong by the wind blowing on its excrement, on the other, the dogs might eat it, and so render the infant sick [cf. similar disposition of menstrual flow in trees—sect. 89]. The Pennefather River mothers always cover their infant's (urine and) excrement with earth: their exposure (for reasons which were not ascertainable) would cause the child to die.

The Proserpine natives, believing that they can be made sick by their excreta being burnt, always take the precaution of covering them with earth to hide them from their enemies.

81. Sexual History. *Conception not necessarily due to copulation* [see also sects. 82-83].—Although sexual connection as a cause of conception is not recognised among the Tully River blacks so far as they themselves are concerned, it is admitted as true for all animals:—indeed this idea confirms them in their belief of superiority over the brute creation. A woman begets children because (a) she has been sitting over the fire on which she has roasted a particular species of black bream, which must have been given to her by the prospective father, (b) she has purposely gone a-hunting and caught a certain kind of bull-frog, (c) some man may have told her to be in an interesting condition, or (d) she may dream of having had the child put inside her.

By whichever of the above methods the child is conceived, whenever it eventually appears, the recognised husband accepts it as his own without demur. A similar belief holds good amongst the Kia blacks of the Proserpine River, but here it is the medicine-man (*warwinjala*), originally informed by *Mogari* (sect. 69A), who tells the woman's father or the woman herself that she is about to be with child. When twins occur, the second child is accounted for by the mother having been told to be in an interesting condition by a medicine-man belonging to another country, and with whom both parents are accordingly correspondingly angry.

At Cape Grafton it is a particular species of pigeon (*KUG..kope*) which brings the already-manufactured baby to the mother in the course of a dream.

82. Infants may be fashioned by spirits and then inserted in the mother.—Nguta-Nguta (sect. 77), also known as Talpan, are the nature-spirits living in the dense scrub and under-growth who send the babies along. The Cape Bedford blacks believe that these spirits have very long hair, with big ears, and two sets of eyes, one in front and the other behind, *i.e.*, they hear and see everything: they are visible only to certain old men, but disappear into the ground whenever anyone else comes near: and are like human beings in that they have wives, children, and spears. The same natives say that babies are made in that portion of the west where the sun sets, and in their original condition are full grown, but in their passage into their maternal homes take the form of a curlew (the spur-winged plover) if a girl, but of a pretty snake if a boy. When once inside the mother, baby takes on its human shape again, and nothing more is seen or heard of that particular bird or snake. When at night the blacks hear the curlew crying out, they will say: "Hallo! there's a baby somewhere about." In the case of a boy, the woman will probably be out hunting, and suddenly sing out that she sees the snake in question, and, as often as not, run away: her mates, even she herself will perhaps, join in looking to see where the serpent has got to, and turn over rocks, leaves, and logs in their fruitless search—it can nowhere be found, and this is a sure sign that it has reached its destination, and the future mother knows now that she is pregnant. It is the husband here who asks for the baby to be sent as a punishment when vexed with his wife.

83. Anje-a (*cf.* Anjir, sect. 62) originally made by Thunder, is the individual, according to the Pennefather blacks, who fashions the piccaninnies out of swamp-mud, and inserts them in the bellies of the women. He is never seen, but can be heard laughing in the depths of the bush, amongst the rocks, down in the lagoons, and along the mangrove swamps: when he is heard, the blacks say "Anje-a he laugh: he got him piccaninny." Women do not know when the infants are put inside them—they only feel them subsequently—because they may be placed in position during the day-time, at night, and in the course of a dream. Before actually inserting these mud-babies in the women however, Anje-a makes the boys travel in a round-about way across the bush, their forms being already moulded into shape, whereas he causes the girls to pass over a piece of wood stretched crosswise, at a certain height, over the path he instructs them to travel by: as each girl stretches her legs over the cross-piece, she gets split in the fork and is now completed. For cutting the posterior orifice in both sexes, Anje-a uses a piece of wood from the *Acacia Rothii*, Bail. (NGG. lar). Sometimes an accident befalls these infants before they get inside their human mothers, *e.g.*, they may catch one of their feet in a log, and so be born with various deformities (club-foot, etc.). When the woman has plenty of room inside, twins are sent. Thunder, who can also make children out of swamp-mud, manufactures his all left-handed, which can thus be distinguished from Anje-a's, who are all right-handed. How the vital principle (*cho-i*) is obtained, and put into the mud-baby, is explained elsewhere (sect. 68).

On the Proserpine River, it is Kunya who makes the babies out of pandanus roots, and puts them into the women when bathing. He is a nature-spirit most often dwelling in the ground, but he is also to be met with below the water-surface, as well as in rocks and caves and in the quiet of the bush. When he inserts the infant in the mother, he puts in it the kuya or vital spirit (sect. 69a).

When it is remembered that as a rule in all these Northern tribes, a little girl may be given to and will live with her spouse as wife long before she reaches the stage of puberty—the relationship of which to fecundity is not recognised—the idea of conception not being necessarily due to sexual connection becomes partly intelligible.

84. Love-charms.—On the Pennefather River, when a girl fancies a boy, she sends him through his mother a piece of over-cast and raddled fibre-twine (made of *Careya australis* or *Malaisia* sp.) known as a tangka-a (Fig. 7): this he wears as a necklace if her feelings are reciprocated. Furthermore, if the girl's mother subsequently approves she will fix into the hair at the top of the boy's head a circular ring (of raddled *Malaisia* twine) known as a pauri (Fig. 6): if it should be lost, she can renew it. The specimen of pauri in my possession is made (accidentally or designedly) of a 3-ply. It is difficult to learn whether the wearing of these strings is only a sign of the betrothal, or whether the articles themselves are to be considered in the light of love-charms. At any rate, when the boy receives one or the other, especially the tangka-a, he feels very keen in the matter. Certainly in this same district, when a man fancies a woman, and he wishes to inflame her passions, he puts a stripe of red clay all the way down his flanks and along the outer sides of his lower limbs, while at the same time he smears over the front of his body a preparation (*kotenui*) made from the inner bark of the tchannan (*Denhamia obscura*, Meisn.), or tre-inni (*Pithecolobium grandiflorum*, Benth.) mixed with charcoal, which gives him a peculiar scent. He then passes close to her; she both sees and smells him, and gets her passions excited. Similarly when a younger brother here goes to claim his elder brother's widow, he rubs the root and bark of the je-anjata (*Psychotria Fitzalanii*, Benth.) on his face, body, knees, hands, and spear: she is believed to be attracted by the smell [*cf.* effects of axillary perspiration on Tully River (sect. 80)]. Another means of gaining the same end is for the man to give the woman he feels a passion for some small pieces of the root of the *Denhamia* mixed with honey in her food: this makes her reciprocate his feelings. The bush-blacks here also employ a species of *Owenia* (NGG. boraga-aganganama) as follows:—After soaking the bark from the stem and roots in water, they smear the mixture over their chests, bellies, and thighs in the belief that it acts as an aphrodisiac.

The Proserpine River aboriginal buck will eat a leaf of a tree very like the iron-bark, and while chewing it sing (*sic*) at the girl he wants, somewhat after this fashion: "Maggie! I like you. I want you belong me." The female here can bring her faithless swain to reason by breaking up a *Santalum* leaf in water, which she gets his mother to give him to drink.

85. On the Bloomfield River, a woman will develop a fancy for a man, and confidentially tells her friends—who will, of course, take care to let him know!—that she is "Kura-tchi" on him. This Kura is the grub of a *Rhynchophorus* beetle, one of the Curculionidæ, and remarkable for the tenacity with which it clings on to objects, as well as for the comparatively large hole which it bores into the *Melaleuca* and *Xanthorrhoea* trees. When, therefore, a woman is Kura-tchi—"has got the Kura"—it means that she is believed to have one of these grubs in her vagina, where it can be seen by anyone who cares to make the examination; in other words, she is very keen on the man she thus temporarily fancies. This condition often proves to be a source of trouble. Women will fight on the accusation of the one that the

other is Kura-tchi on her husband: a husband may accuse his wife of being Kura-tchi on someone else. On the other hand, there are said to be certain charms by means of which a man can purposely make a woman Kura-tchi on him.

86. Similarly, on the Tully River, a woman will get a man to fancy her by passing into her vulva a nut of the *Castanospermum australe*, A. Cunn., or of the *Cryptocarya Bancroftii*. She may place it in the position mentioned at any time, but apparently does not keep it there for very long.

87. Among the Yaro-inga natives of the Upper Georgina River, between Urandangie and Headingly, etc., certain kinds of "roarers" (Roth: Bulletin 4, sect. 13) are used as love-charms. This form of implement is obtained from the Workai-a (? and Toko Range) tribe, whence its use in this connection has been learnt. It appears to have no special term applied to distinguish it from the ordinary toy variety, than which it is larger, although it is recognisable by two types of gravings: one (Fig. 8), the ring of concentric circles (Yurangudu), represents the smouldering fire-sticks, coolibar-roots, etc., being swung round and round at the camp-fires during the "sing-song," etc., at night; the other (Fig. 9) is a representation of the female genitals, each half-circle indicating a labium. The talisman is swung at intervals during the hours of night, at a considerable distance from camp, by males only, in the belief that the women whom they are bent on having connection with will reciprocate their passions with increased fervour. The female referred to, of course sees nothing of the web into which she is becoming entangled, though she may feel its effects: she experiences a feeling of becoming more and more enamoured, and finds herself repeatedly exclaiming "I like this-fellow boy." No woman is ever allowed to handle or to gaze on one of these love-charms. Amongst the settlers around Camooweal, etc., these particular charms used to be known by the cacophonous term of "gin-busters."

88. *Copulation during sleep, etc.*—On the Tully, women maintain that they can be copulated with during sleep without their knowledge of it. At the Moreton, if a certain plant be burnt, and the smoke made to pass over a sleeping woman, a man can have connection with her without her waking: a similar idea appears to be prevalent at Cape York where, in addition, the same effect can be produced by mixing the plant up in the woman's food. (W. R. Webster.)

89. *Puberty and menstruation.*—In the female the protuberant breasts, etc., are brought on by the one right man—either one of the very old men or the one to whom she has been betrothed by her parents—sleeping with the young girl in question, but not necessarily indulging in sexual connection, and always keeping her at the back of him (Tully River). On the Proserpine there is an underground nature-spirit, one Wunggomalli, who is the especial friend of boys and girls, whom he causes to mature by blowing upon them occasionally: it is he who advises the parents as to their disposal when fully developed.

On the Tully, menstruation is produced by the liver regularly breaking into two, and discharging. What causes the breakage the women do not know: they maintain, however, that it has nothing to do with pregnancy, though they admit its non-existence during that physiological period. Women here declare that they can stop their menses by standing under a particular kind of gum-tree, and allowing some of the sticky exudation to fall on them: this procedure is said to be resorted to in order to enable them to walk about at all times without inconvenience. It is also believed that the menses can be stopped by their husbands and others collecting and cutting up any grass, etc., on which their menstrual flow has fallen—but as this is about the last thing the men would touch, any confirmation of this belief is not forthcoming. On the other hand, were their periods to be thus purposely stopped, the men would be enabled to continually pay them sexual attention, a course to which the women assured me they objected. And this is accordingly really the reason why females always place any such soiled grass, leaves, etc., high up on the fork of a tree well out of man's reach. [Cf. similar disposition of faeces, sect. 80.]

Menstruation is produced by a certain kind of curlew [cf. curlew in connection with the bringing into the world of baby girls, sect. 82] inserting his beak into the woman's vulva with a view to extracting the "honey" for his father, the hurricane. (Pennefather River.)

On the Bloomfield River, menstruation on the part of the younger women is looked upon with ridicule by the elder ones. In the old days, i.e., when they still used their tea-tree barks (on which they used to lie, or cover themselves with), if any aged matron saw any stains from this cause, she would unmercifully chaff the young woman who had given rise to them. It was considered the correct thing for young women to bear children, and the connection between pregnancy and the stoppage of the menses was recognised. (R. Hislop.)

[In the old Brisbane days the blacks would die if they went anywhere near the spot where anything that had passed from a woman during her periods was placed: this spot was indicated by a pointed stick in the ground, close to which would be put a piece of tea-tree bark or some tussocks of grass. (T. Petrie.)]

90. *Ceremonials at early menstruation.*—On the Pennefather River, during the first three menstrual periods, the young girls undergo a certain ceremony, the successful execution of which is said to assure them suppleness of the hip joints, etc., and general ease in future child-birth. As elsewhere, the girl may be given to, and will live with, her future husband for some years before she is fit physically for matrimony. When she first notices something wrong with her, she asks her mother what is the matter. The latter takes her away from the camp to some secluded spot where, in the shade of a convenient tree, she makes a circular excavation in the sandy ground, at the bottom of which she puts a piece of bark. The girl squats on this with open thighs and legs crossed, each knee, with adjacent portion of thigh, being supported by a small log placed underneath it. Close to each hip, a digging-stick is stuck firmly into the ground, and the whole of her body from the waist down is covered with sand. She is next closely surrounded with more or less of a bush-fence broken only in front where her mother lights the fire. Here she continues to sit with her arms crossed, and the palms of her hands down—resting, in fact, on the sandy mound covering her extremities. She may only shift her arms to receive the food handed her by her mother, or to scratch when necessary (i.e., for lice) the exposed parts of her body, face, or head: not

being, however, allowed to touch herself with her hands, she has to allay any such irritation by means of a small wooden splinter which, when not in use, is stuck in her hair. She may speak with her mother only—indeed, no one else would ever think of coming near where she is—and when she rises of an evening to be taken back to camp, she drags herself up by pulling on the tops of the two digging-sticks at her side. On arrival at camp, she is allowed to talk to her husband. The next morning her mother takes her back to the same spot, and there she again remains till evening: after five days of this, when the excavation is finally covered over with ashes, she is restored to her husband. Before being returned, however, on the evening of the fifth day, her mother decorates the girl with a waist-belt, pearl-shell necklet, and forehead band, sometimes also with a chest pearl-plate; she also ties strings (interwoven with feathers of the green mountain-parrot) round her arms and wrists, across from shoulders to opposite arm-pits, and from the waist upwards, back and front, smears her in blotches of red, white, and yellow pigment. The underlying idea is apparently to render her pleasing and acceptable to her spouse. When the young woman becomes unwell the following month, she is again taken away by her mother, another excavation made, and the ceremony repeated, etc., for a length of four days, and so again, on the third occasion, for six days. At the fourth she remains in camp, but signifies her condition by wearing a basket of empty shells hanging down her back, an adjunct which prevents her lying on her back for marital purposes, and by lighting a fire for her own separate use apart from her husband's. The following terms express the various stages through which the girl passes at her early menstrual periods:—

truksa-morra(unba)-tche = head-fighting stick-to strike, *i.e.*, a female at first menstruation the idea being that her condition is due to what we might call cerebral congestion, the flow, it is believed, having come from her head which has been struck.

tre-ana = the spot where she has to sit in the shallow excavation already referred to: hence, *t.-pimidi* (one), *t.-ambuthari* (two), *t.-chumo-chumo* (three), and *t.-muridiki* (plenty) signify a young woman at her first, second, third, and fourth menstruation respectively.

mo-a(ga)-tanna = fire-to make, *i.e.*, a young woman at full puberty when, during her periods, she remains in camp with her husband, her physiological condition being then indicated in the manner above described.

For reasons which will be readily understood, the photographs represented in Figs. 10 and 11 were taken by me from a child specially decorated, etc., by the mother for the purpose according to the orthodox fashion.

At Margaret Bay, on the opposite, eastern, coast of the Peninsula, an Otati woman informed me that a similar ceremonial takes place, a statement which confirms a photograph (Fig. 12) given me by an individual who was acquainted with the natives of that district.

Further down the coast-line I have not been able to trace the indications of any similar proceeding at Cape Bedford, or at the Bloomfield River. South of Bowen, however, among the Kia blacks of the Proserpine River, the following custom used to take place. At first menstruation, the young girl, in company with her mother and sister, leaves camp for about a week, and continuously sits or lies down in a shallow excavation, at the bottom of which are placed a layer of leaves covered with an opossum rug: she is protected from the inclemency of the weather by a roughly-made bush-hut (*kaula*), with but a small entrance, erected over her. She is asked by her mother and sister—she is not allowed to speak with anyone else—when hungry, but she has to be satisfied with one particular kind of yam only (*Phaseolus Mungo*, Linn.), which after preparation at a fire some distance away is handed to her. She can drink water, but must not touch it with her hands. She may scratch herself, if necessary, just a little, but strictly speaking she ought only to use a mussel-shell for the purpose. When she wishes to come outside for sanitary reasons, she is led to a distance by the mother and sister holding her arms, and is brought back in the same fashion. During her second and third periods the same ordeal is gone through, but on the termination of the latter, she is brought back to her husband decorated with eagle-hawk or cockatoo feathers in her hair, a shell hanging over the forehead, grass bugles round her neck, strings tied on her arms and wrists, an opossum apron-belt round her waist, and her body covered all over with a pattern made up of red, white, and yellow pigments and blood-wood charcoal.

91. Pregnancy.—With regard to pregnancy it is the child inside which makes the breasts protude, and the mother can tell whether it will be a boy or a girl by the colour of the nipples (Tully River). The Pennefather River women believe that if the nipples are protuberant it will be a boy; if flat, a girl may be expected.

92. Twins, Triplets.—A woman on the Tully River gets twins or triplets as a punishment inflicted on her by her mother-in-law for not paying her sufficient attention in the way of collecting fire-wood, etc.: when the daughter-in-law is away from camp, the old lady will come and plant two or three pebbles underneath where she sleeps, and the latter will bear twins or triplets accordingly. Occasionally, however, twins will be here accounted for by the woman dreaming of having been told to be in an interesting condition by two different people. A similar idea of being told, etc., holds good on the Proserpine (sect. 81). At other times a woman is presented with twins because she has room for them (sect. 83).

93. Miscarriages are brought about by the action of cloudy weather, a rainbow (sect. 23), and by going too much in the water (Tully River). At Cape Grafton a woman is barren because she has drunk the blood extracted from a doomed person (sect. 143).

94. Right- and Left-handedness.—The Tully River blacks say that at actual birth, according as the child first presents its face to the left or to the right, so will it be left- or right- handed throughout life. On the Pennefather, this depends upon whom the infant was originally fashioned by (sect. 83).

95. Congenital deformity is due to the wrong man having told the mother to become pregnant (Tully River). It is also ascribed to the mother having eaten certain forbidden things, *e.g.*, wallaby, during pregnancy: one particularly hump-backed boy explained his deformity to me as due to his mother

having eaten porcupine when carrying him (Bloomfield River). In other cases the child has only itself to blame for catching its foot in a log (sect. 83), or for tangling itself up in its mother's inside, the belief held by the Proserpine blacks.

96. Auguries, Dreams, Wishes, Luck- and other Charms, etc.—“*Hawking*” of *phlegm*: *Snoring*.—The hawking of phlegm in the throat, as well as snoring, denotes the advent of some one from a very long distance. (Pennefather River.)

97. Sneezing.—When a Tully River man sneezes, there is some woman in love with, or talking about, him. Similarly, on the Pennefather, the fact of a person sneezing indicates that some one is talking about him or her, for good or for evil, in a neighbouring camp. If he considers that evil is being spoken, he will go next day and inquire. He may tax one or two men, who will probably deny it, but he takes the precaution, while inquiring of each, to point his hand (with fingers enclosed over the bent thumb) at each in turn: if the thumb-joint cracks, this is proof positive that the accused did speak evil of him. As far as is ascertainable, this procedure may be exercised by a “bully” over some other individual whom he knows he is capable of overpowering, and sneezing is thus often wilfully made the pretext for a quarrel.

98. Spitting, which is a sign of contempt pretty well everywhere, is in addition a somewhat serious affair on the Tully River, where the person spat upon becomes sick and emaciated (sect. 127). Among the Otati tribe of Margaret Bay, the novitiates are said to be spat upon during the course of the initiation ceremony, but its signification is not known. When a Cape Bedford black unintentionally mentions some word or name that is forbidden, he will avert any injury or damage accruing therefrom by immediately spitting and saying “barkar kadæ!” (= mouth foul). [Mr. T. Petrie tells me that the old-time Brisbane blacks would believe in quelling a rough sea by spitting on the waves (cf. sect. 104): they also considered that spitting could both cause and stop rain (sect. 21).]

99. Whistling.—Any whistling sound on the Bloomfield is connected with the spirits of people deceased: in fact, the latter are supposed to communicate with mortal men by whistles which the old men are believed capable of interpreting. It is for this reason that whistling is not encouraged here, especially after dark: the spirits might think they were being mimicked. Similarly, the Tully River blacks do not like anyone to whistle: they believe that this brings up certain spirits, e.g., Pitcharu (sects. 8, 65), Koi and Ku-inggan (sect. 65), who may do them harm. [At Brisbane, whistling was never practised except during the initiation ceremony, when it constituted a signal for the women to keep out of sight and hearing. (T. Petrie.)]

100. Crick in the neck, when turning the head sharply round, as well as sudden “shivers,” signifies that there is danger behind: someone is watching for an opportunity of throwing a spear at you (Tully River). [Compare the cracking of the thumb-joint in connection with speaking evil (sect. 97).]

101. Breasts tingling.—A mother when expecting her son's return to camp, says she can feel her breasts tingling on his near approach to the neighbourhood (Bloomfield River): the same superstition holds good for any child of her's on the Tully, as well as on the Pennefather River, where both breast or belly may experience similar sensations. [In the latter district the parents can, in addition, dream that their children are returning.]

102. Birds flying close to a person, etc.—The fact of a dove flying close to an individual, at Cape Bedford, indicates a very good augury for him in everything. On the Pennefather River, when any bird flies in close proximity to a man, it means that he is about to meet a friend. On the Tully River, the twitter of a certain scrub-bird warns the traveller that some enemy is close at hand (sect. 104).

[In the Brisbane district there was a species of large thrush, known as mirran, which, if it were heard singing anywhere near the camp, would be addressed rationally, and asked if there were any strangers in the neighbourhood: supposing it did not sing in reply, this would be accepted as a sign that no foreigners were present. If anything, however, should have afterwards happened, the natives would blame themselves for not having asked it some particular question relative to the event under review. (T. Petrie.)]

103. Determination of cause of death, etc.—In addition to the augury depending upon a nature-spirit spitting (sect. 147: snake-bite), charcoal-pellets remaining suspended in mid-air (sect. 130), etc., mention must be made of the procedure adopted at Cloncurry to discover whether a person's death is caused by a countryman or a foreigner. The near relatives of the deceased will fix upright on the grave a small forked stick, and place in the fork a manda-kuya (sect. 154): this is done at night, and if on the following morning the latter implement is found on the ground, it is proof positive that the late lamented met his death at the hands of an enemy from some district a long way off.

104. Crossing water.—When about to cross a stream or creek, the twitter of a certain bird will warn the Tully River wayfarer to desist, and that danger in the form of a crocodile, etc., will beset him if he persists in the attempt. A native of the same district will feel his thighs or legs tingling upon first wading into a stream if there is a crocodile anywhere about, and will thereupon postpone swimming across until another occasion. If however he does not experience these subjective sensations, he will lap up a handful or two of water, which he puts into his mouth and spits out again into the stream: this will ensure him a safe passage even if a crocodile, unknown to him, should be lurking there.

Whenever, in the Boulia district, a big flood comes up, it brings Karnmari, the nature-spirit in the form of a huge water-snake, so that supposing our traveller wants to effect a crossing, he will only venture in up to his waist: if the water be warm he will get across either there or at some other spot: but if too cold, and he persists in the attempt, he is sure to be caught by the snake, i.e., drowned, when nothing can cure him or bring back animation. If about to swim any big stream or river which he suspects or fears, the native will speak to Karnmari, expressing himself somewhat as follows:—“Do not touch me. I belong to this country.” But were he to cross even his own country's river with a stranger to the district, it is possible that harm might befall him.

When about to cross a creek, etc., and the Pennefather River native is in doubt whether it is safe to do so or not, he puts a mangrove leaf on the surface of the stream, and watches it carefully. If the leaf—and only a mangrove can be used for the purpose—moves backwards and forwards, or circles round, there is a shark or crocodile about: if, on the other hand, it remains perfectly still, there is nothing there for him to be afraid of, and he may cross in safety.

For a similar purpose, the fluffy down from a laughing-jackass can be used on the Proserpine River: but in this case, if the feather remains still, there is some danger to be feared beneath—if it moves, there is nothing to be afraid of.

[*Passing under a leaning tree.*—The Brisbane blacks would never pass under a leaning tree that had been tilted by the wind, etc., so as to bend over the beaten track, but always went round: if they passed underneath it they would be sure to die. In the same way, in the early days, a black could never be got to pass under a fence. Similarly, if when out walking, hunting, etc., a dog passed between a man's legs, he would immediately stand still, call the dog back, and make it pass the same way back again: were not this done, both dog and man would die. So again, no one was allowed to step over another's body or any of his belongings: if a woman did such a thing, she would be instantly killed. (T. Petrie.)]

105. Welfare of friend recognised by condition of tree.—On the Pennefather River, when a visitor has made him (or her) self particularly agreeable, and takes his departure home again, an effigy of him, about 3 or 4 feet long, is cut on some soft tree, e.g., *Canarium australasicum*, F. v. M., but on that side of it which faces the direction he is travelling home by (Fig. 13). From the condition of this tree—if the leaves fall, or it gets blown over, etc.—the natives can tell the condition of health, safety, etc., of their friend (cf. effigies in sect. 128).

106. Dreams cannot be accounted for, though great importance is attached to them on the Bloomfield, where the natives will tell one another what they have dreamt, and either interpret it themselves, or discuss it with others. It is here that a native may set his mind on dreaming that his enemy will die—and with satisfactory results. The Tully River blacks also regard dreams:—When friends are expected, a dream will tell them whether they are close at hand or not: they can go to sleep and make up their minds to dream that a certain enemy is dead—and he will die: if they have night-mare, it is the spirit of a deceased person (Koi, etc.) that is resting on them and preventing them getting up: if their women dream of having children put inside them they may beget them: if some crime is committed, the culprit, as in many other districts (sect. 148), can be discovered in a dream. At Cape Grafton it is in a dream that the pigeon brings the mother her baby (sect. 81). In the Boulia district it is during the course of a dream that a medicine-man may learn the mysteries of the craft. On the Pennefather River, parents can dream that their children, after a long absence, are returning: any dream here is due to their own ngai (sect. 68) talking to them during sleep.

107. Wishes.—A black will earnestly yearn for some particular fruit, etc., to come into season, and will send one of the larger species of spider to bring it—and it will come. The coastal aboriginals especially and firmly believe in this method of satisfying any particular craving. (Tully River.)

108. Luck-charms: (for catching turkeys, dugong).—On the Starcke River a charm for obtaining more turkeys consists in laying a dead one on a grid, and covering it over with bark and sticks. A somewhat similar belief prevails here and along the neighbouring Princess Charlotte Bay coast-line to the effect that if the bones or skulls of the dugong be not put away in a heap or otherwise preserved, no more will be caught. Some of these bone-heaps are of comparatively large size: on the other hand, I have seen dugong skulls hidden singly under bushes on Flinders Island.

109. (for throwing spears straight).—In the case of spear-throwing among the Ducie blacks, if a small piece of human flesh be fixed on to the wommera, between the two shells composing the handle, the spear will never err in its flight. In the same way the Olkulo blacks, on the northern extremity of Princess Charlotte Bay, will fix a piece of human bone on the spear-thrower for luck when after kangaroo and emu. At Cape York the flight of a spear will be absolutely true if the thrower swallows some ground-up quartz-crystal.

110. (for success in hunting, fishing).—At Cape Bedford a piece of quartz-crystal coiled up in hair or grass, so that no one can see it is carried about by anyone who wants to have luck in hunting and fishing. The crystal is supposed to be a bone, or part thereof, of a man, is usually found on old burying grounds, and is to be looked for during the night time: the bamboo or wooden handle to which the quartz is often attached is hollow, and supposed to be filled with human blood taken at night out of a living person (Fig. 14). Among these same natives anyone who carries about with him a piece of human ham-string (wrapped up usually in bark) is sure to have luck in hunting. On the Proserpine River the hunter would, while warming various of his knick-knacks in his hand over the fire, talk to them, and tell them to get him fish or game, etc.: these curios, carried in a little dilly-bag under the left arm-pit, consisted of knuckle-bones, knee-caps, bits of kidney-fat, etc., believed to have been removed, at night, from the bodies of his enemies. The blood extracted from a doomed person at Cape Grafton brings luck to the fishermen when smeared on the canoe or wommera (sect. 143).

111. (for making dogs good hunters).—On the Bloomfield, if the owner wants his dog to become an expert tip-top hunter, he will rub him over each morning with a piece of quartz-crystal (Fig. 15).

112. Charm for driving mosquitoes away.—A charm for getting rid of mosquitoes on the Batavia River is made in the shape of a man 3 or 4 feet long, tied to a thin withe, on identical lines with the arrangement whereby a human body is suspended to a transverse pole, during the drying stage, preparatory to cremation. This figure, known as Nguru, is made of grass, and is represented with a huge nasal organ, through which a nose-pin is passed; the eyes are indicated by pieces of pipe-clay on which large charcoal pupils are painted; while the head is decorated with a few cockatoo feathers (Fig. 16). At night, when the mosquitoes are worse than usual, this figure is carried by two people, after the same fashion as a corpse, in front of the entire camp, in procession, to some considerable distance in the bush,

at a spot where a fire has been already lighted. The men, women, and children constituting the procession keep up a terrible din and noise, waving and gesticulating with their arms at the same time. As soon as the fire is reached, Nguru is thrown into the flames, and the entire crowd of people makes a rush back for the camp. The Rev. N. Hey tells me that on the last occasion this method was tried it proved successful.

On the Tully River, certain individuals can make the mosquitoes put in an appearance (sect. 72).

113. Disease and Accident: Produced by an enemy dooming the victim.—

The person inflicting the doom is considered more culpable than the one committing the actual physical violence or visible ill.—The very large majority of accidents, ills, and diseases to which man is subject are wilfully produced by enemies of his, living or dead. An individual can thus be "doomed" to be bitten by a snake, struck by lightning, killed by a falling tree, injured by running a thorn into his foot, inflicted with some vile disease, or pierced with a spear. The snake, lightning, spear, etc., are not so much to blame for the visible consequences: they only put the finishing touches, so to speak, on the act of doom. Occasionally a whole tribe is held responsible, as in the case of coughs and colds in winter-time on the Tully River: the red streaks in the sky at sunset indicate the direction where the tribe which sends these complaints resides. It is this same superstition which makes the spread of venereal disease amongst the natives so difficult a matter to check. The aboriginal of the unsettled districts does not know that syphilis is due to sexual connection or other sources of contagion, the long incubative stage of the disease going far to render such ignorance quite intelligible to us Europeans. Husband and wife thus continue to cohabit, even during the worst stages of the disease, and quite satisfied, when one or other is at last infected, that they have been "doomed" for the complaint at the hands of an enemy by means of witchcraft (sect. 133).

Thanatomania.—Should the invalid be restored to health too speedily, he has no means of discovering the enemy who has done him mischief; neither does he then trouble himself about finding out, but rather comes to believe that he must have got sick through his own fault, and has therefore only himself to blame (sect. 150). He may even have tried some of the remedies approved of and utilised in the latter class of cases, and it is only when he has found them of no avail, his complaint to be getting worse, and himself becoming weaker, that after a certain length of time—varying more or less with the idiosyncrasy of the individual—he satisfies himself that he is doomed. He accordingly takes various steps to withstand the doom, and discover his assailant, etc. (sect. 148), but usually and finally seeks the assistance of a medicine-man to help him withstand the effects of the charm, talisman, etc., whatever it may be (sects. 127-143), that is causing the mischief; and should no improvement manifest itself, he may give up hope, and deliberately lie down to die (sects. 147c, 148). In the course of my professional experience out in the western districts, five or six of such cases of Thanatomania have come under my personal notice, a strange one being that of a fairly educated half-caste in the Government postal service. Similar instances are recorded, on the one hand, by Spencer and Gillen from Central Australia, and on the other, by Mr. T. Petrie, in the early Brisbane days. The most curious of which the latter informed me was the following:—Jimmy, an old servant of his, whom he had been treating off and on for a long time past for a sore throat, came back from his "walk-about" to say that he was going to die, and would be dead in three days, at the same time giving directions as to the disposal of his skin and body. Petrie, of course, laughed at him, gave him medicine, thought nothing more of the matter, and as usual, had him sleeping on the premises. On the third night, he asked to be allowed to go down to the camp, and Petrie acquiesced, but was terribly surprised when he learned next morning that poor old Jimmy was lying dead there.

114. The condition of being doomed—KYI. Wondor, KUG. Kanji-i, etc.—is recognisable by certain strange traits in the victim's character or demeanour. Thus at Cape Bedford, in 1899, a man was explaining to Rev. Schwarz how that a fortnight before his step-son's death by spearing he knew there was something radically wrong, that his step-son in fact was "wondor" because, when out fishing, the deceased continued paddling his canoe longer than was necessary and, when in camp, he replied to questions with unsuitable answers. What is supposed to actually happen to the victim when doomed, varies in different localities. For instance, at Boulia, he is deprived of his blood which is replaced by a bone, or pebble, etc. (sect. 144): on the Pennefather River, his blood is made bad (sect. 136): on the Upper Georgina River his belly is ripped open or his throat cut (sect. 129): on the Tully River, a rope is inserted just below the Adam's apple somewhere into his chest (sect. 141): at Cape Grafton he is choked when asleep, tongue and blood removed, and a bone splinter pierced above each nostril into his head (sect. 143): at Cape Bedford, he is hit with a stick, his head cut off and put on again, his neck twisted, or his ham-strings cut: at other places, a piece of spear, splinter, bone, or quartz-crystal, etc., is put in his "inside" through an invisible wound. All these superstitions have an important bearing in explaining the various courses pursued in combating the evil thus maliciously inflicted, or in discovering its source of origin when fatal consequences ensue. We must not, therefore, be surprised to find cases recorded where in serious spear-, boomerang-, or waddy-wounds, the medicine-man will make-believe to extract a crystal, or when dealing with burial-customs to learn that haruspication and similar practices are in vogue.

I am informed (by Mr. M. Haskett) that in the neighbourhood of Macdonnell a person may be doomed against his will to commit crime on another: he will perhaps spear his victim and, when challenged by the tribe, will plead that he was in the condition of puri-puri, i.e., that he was involuntarily forced to do it (cf. the condition of wu-tohi, sect. 116).

115. The doom may be inflicted by living people, with or without the assistance of spirits of people deceased.—The enemies capable of dooming others to suffer the various accidents and ills that are met with throughout life's journey are either living men, spirits of persons deceased, or nature-spirits. It is an interesting fact that many of these nature-spirits—in the few instances that I have had the opportunity of discussing the subject with natives who were able to render themselves sufficiently intelligible—are originally derived from the bodies of dead people, i.e., from spirits that have taken to the solitudes of the mountain or forest. The living men professing to indulge in these practices either assume or are taught the mysteries of their craft, and may for the present be spoken of as medicine-men or doctors.

(sect. 117-126). They may act with or without *tredentials*.—The doctor's stock-in-trade, charms, talismans, cases subservient to them, or influence certain ~~was~~ carried in a specially-constructed dilly-bag, slung over (e.g., rain, thunder, etc.)—to carry out their wishes. ~~Carry~~-pit. named after a nature-spirit (sect. 120).

116. *The doom may be inflicted by spirits independently.*—On the *irk* of removing by mouth or hand known to me where the spirits can practice their occult powers independently been inserted, and to be Along the Tully River, a swollen hand or foot (with no physical cause assignable) ~~if~~ but on no account is Ku-inggan, i.e., male or female spirit, of some long-dead enemy having returned and scrtitioners. If she particular parts at night time: in this district also, Koi, etc., will punish the blacks ~~to~~er husband, about alone (sect. 65). Among the Pennefather River blacks, if an accident should befall one near Cape certain tree, that tree would never be cut down: the cho-i or ngai (spirit of person deceased) who purposely caused the mishap might be in hiding there, and he would be sure to have his revenge. At Cape Bedford the wau-wu (spirit) of a dead person will come back and take another person out of the same tribe, sometimes a relative, and rush away with him, holding him by the wrist and pulling him on as fast as he can go, until he falls down from sheer exhaustion. Though his friends know that he is being rushed along by the wau-wu, they cannot see the latter. Sometimes the individual so "possessed" —now known as wu-tchi—is pulled up a sloping tree or up some steep incline, but wherever he falls, there he remains until his friends, following close upon his heels, bring him back. Rev. Schwarz has himself seen such a case, the individual possessed having a strange, wild look about him, and labouring apparently under great mental excitement (*cf.* condition of puri-piri, sect. 114). On the Bloomfield, certain diseases and other impending physical disasters are ascribed to spirits, Marúnji, friendly with certain individuals (e.g., medicine-men and some of their followers), but at enmity with others: those who reckon these spirits as friends will ward off the impending danger by the exposure of anything red: those who consider them enemies will hide any such colours out of sight. There is also a nature-spirit here, Yirru, living in the ground. The older men to whom the country originally belonged will give out that certain tracts of it are "yirru," with the result that if any females or males (other than themselves) eat or camp there, or disturb the soil in any way whatever, this spirit will punish them with grievous sores, etc. Indeed, near Baird's selection (Conneimara) in one of the waterfalls is said to be a large rock which travels up and down the foaming cataract: this particular stone is believed to be Yirru in a visible form who can inflict diseases of all kinds. There are one or two similar rocks in the Endeavour River at the 8-Mile (Cooktown) Native Police Camp. In the Cloncurry district any sudden disappearance (which Europeans would probably speak of as murder and concealment of the body) is credited to Mokipiango, a nature-spirit living underground in the seclusion of the mountain fastnesses. This bogie is something like a blackfellow in appearance, but has some very long teeth with which he can easily bite through a man's neck: he drags his victim into the pit and eats him. The natives of the same district believe that mental disease is due to a spirit known as Daipanganya. Karnmari, the nature-spirit in the form of a huge water-snake, is the one who drowns people (sect. 104) in the Boulia district. On the Palmer River, all diseases which do not admit of cure by any method, are ascribed to the machinations of a spirit in the shape of an eagle-hawk, the son of some medicine-man, who has taught him all about these things. This scamp of a son even in daylight—when he is as invisible as he is at night—will get up into a high tree, and slinging his spear, stupefy his victim, and while in this condition will pick out his throat-strings, remove the fat from his body, the flesh from his arms and calves, and yet leave no outward visible wound: the victim dies rotten (probably of syphilis or phthisis). Spencer and Gillen, ("Native Tribes of Central Australia," p. 533), speak of tribes where the medicine-men can and often do assume the form of eagle-hawks.

117. *Medicine-men: (their powers).*—No "doctors" attend specially on the sick, the charge of all such being left to individual caprice, e.g., a woman looks after her husband, a mother after her child. Nor do they specially prescribe, the knowledge—where known at all—of the therapeutical value of any plant, of massage, etc., being common to the tribe. All that the medicine-men can professionally do is to produce (i.e., wilfully cause) or cure accident and disease: sometimes by means of chants and dirges (sect. 127), or effigies (sect. 128), but most commonly by inserting or removing the magic pebble, bone, spear-tip, crystal, (Figs. 17-18), or other charm with which their graduation or reputation is so intimately associated. As already mentioned, they can also control the forces of nature (storm, wind, rain, etc.), and may occasionally derive assistance from the blood of their victims (sect. 143), from the spirits of persons deceased (sect. 68), and from nature-spirits.

118. *(their graduation).*—The graduation, initiation, or assumption of occult powers by the medicine-men varies in the different districts. In the country around Boulia the individual will leave camp for three or four days, and subsist only on bushes, etc.—that is, he practically starves himself: he gets more or less "cranky" and when in that condition sees a nature-spirit called Malkari, who is pleased to make him a medicine-man by inserting certain small pebbles, bones, quartz-crystals, etc., in his inside. This is the most ordinary method. Other doctors obtain their powers through the instrumentality of Karnmari, a nature-spirit in the form of a water-snake (sect. 104):—Supposing that a man be fishing at the water side, Karnmari may point at him a mangani or death-charm (sect. 144), of course at such distance and under circumstances that he neither sees nor recognises what is taking place. By and by, as the night-shades begin to fall, he sees the dreaded monster undulating along upon the surface of the water, and runs as fast as his legs will carry him to camp, where he recounts what has taken place. That night he goes to rest as usual, but in the morning he feels sick. The sickness continues and he becomes worse and worse. In from four to five days after the attack he is attended by a medicine-man who removes from the patient's inside, by a process to be subsequently described, the identical pebble, bone, crystal, etc., that Karnmari put there, with the result that the individual recovers and becomes a doctor himself. This same pebble, etc., so extracted may be further utilised by a medicine-man inserting it in another novice, and making a fellow-practitioner of him: this procedure may be effected on the individual when he is, perhaps, but a child, and as the years roll on he will suddenly blossom forth with all the powers peculiar to his profession. The ghost, shade, or spirit of some one departed who haunts the graves of the dead, and known as Moma to the Boulia blacks, can also initiate an individual into the mysteries of the craft. The natives here call a medicine-man mangani-marro or kumbo-marro, i.e., possessor of the bone or pebble,

at a spot where a fire has been already lighted. The *meirit* who, when people are in camp at night, can keep up a terrible din and noise, waving and gesticulating the branches, that teaches medicine-men their as the fire is reached, *Nguru* is thrown into the fire not make himself patent, the individual who wishes for the camp. The Rev. N. Hey tells me all the way down to the Diamantina River to a certain successful.

he learns the art as follows:—Having made some suitable present

On the Tully River, ~~is~~ put to death, next thrown into a water-hole for four days, and then taken

113. ~~Disse~~ number of fires are lighted all round him, and his body thus smoked quite dry,

for getting all the water out, and so making him all right and alive again. He is then

The ~~to~~ use the *mangani*, and taught the (in this tribe) necessary song to sing with it, his success ~~physical~~ profession being now assured. The *Maitakudi* here similarly speak of the medicine-man as a *mangani-buna* or bone-possessor: the *Kalkadun* blacks of the *Selwyn* Ranges, etc., call him a *tu-aran*.

119. On the *Pennefather* River where the medicine-men (*NGG. au-uto*) as a special class are now all defunct, they are said to have originally learnt their business at the grave-side from the spirits of persons deceased. The *Palmer* blacks (*KMI*) call the *medicoes* *alwai-ya*.

120. Around *Princess Charlotte Bay*, the medicine-men are known as *naiyunka* (*KWA*) *nganpo-yi* (*KRA*), etc., but owing to ignorance of language, and absence of reliable interpreters, I was unable to gather any more definite information than that these gentry were taught by a nature-spirit called *Aru-a* (*KWA*) or *Aro-unta* (*KRA*), who is said to be identical with the *Dambun* of the *Kokoyimidir* blacks of the *McIvor* River. Amongst the *Cape Bedford* blacks there are none of these individuals graduating as a particular class, though we find certain old men assuming the powers of medicine-men, and described by the special name of *dambun*, the nature-spirit just mentioned. On the *Bloomfield* River they are called *ronya-ji* (*KYE*), at *Cape Grafton* *chichal-barra* (*KUG*.—where *chichal* signifies a bone) and on the *Proserpine* River *warwinjala*. Amongst the *Tully* River natives the doctors have the special name of *Ko-bi* applied to them: they are apparently not specially trained for their work unless, perhaps, by their parents on the quiet, because the power is hereditary here [as used to be the case at *Brisbane*, sect. 121].

121. The idea of a medicine-man with supernatural powers manifested through a bone, pebble, quartz-crystal, etc. (sect. 117), does not appear to have been originally confined to the Northern natives, and the following notes, collected by me from Mr. Thomas Petrie, will give a very fair account of a similar superstition (traces of which can still be gathered from other parts of Southern and Central Queensland) entertained by the *Brisbane* blacks, now defunct, during the first years of European colonisation. Nearly all aches, pains, and diseases were ascribed to the quartz-crystal in the possession of some medicine-man (*turrwan*). This crystal gave its owner supernatural powers. The spirit (*nguru*) of the *turrwan* used to put the crystal (*kundri*) into the victim, who could only be cured by getting a medicine-man to suck it out again: thus, a medicine-man could make an individual sick even when he was miles away, and “doom” him, so to speak. This “dooming” meant being cut up into small pieces and put together again: the spear, or other visible cause, was not to blame—it only completed the deed. The crystal was allowed to be seen by the women, though it was always carried in the grass dilly-bag (under the owner's—a man's—left arm-pit) and generally had a short length of opossum string attached to it by means of bees' wax. The medicine-men could swallow and vomit it up again. So great was the native belief in this crystal that when Petrie once chaffed them about one of their medicine-men being locked up in the convict cells, and taunted them about his not being able to get out, he was informed that the prisoner only refrained from escaping through the key-hole, etc., because he did not like to disappoint and insult his European captors: the blacks were quite satisfied that the individual in question could easily have secured his own liberty if he had wanted to. The crystal also gave the owner power to dive into the ground and come out where he liked: this was how a certain black, when his companions were shot by the native police on a particular occasion, at the head of the *Pine River*, was said to have made his escape. Though quartz-crystal was obtainable in those days at the top of the present *Spring Hill* (*Brisbane*) and various other places in the district, the special pieces which these *turrwan* possessed were obtained from deep pools, creeks, etc., where they were dived for. *Targan*, the individual who was responsible for the rainbow, vomited them out of his belly, and deposited them in such places: the medicine-men knew where to dive for them, i.e., wherever the rainbow ended. In latter years, and the crystals got scarcer, they came to be manufactured from the bottoms of broken tumblers. The power of the *turrwan*, together with his quartz-crystal, was apparently handed down from father to son.

122. (*their status in the tribe*).—In the North-Western districts, no matter the different methods by which “doctors” come to be what they are, all of these folk are co-potent: they can all not only cure, but also produce, sickness according to procedures which will be subsequently detailed. Beyond their occult powers in this connection the doctors, except for certain articles which they keep about them, have nothing to distinguish them from other individuals in the camp: they engage in similar pursuits, enjoy no extra rights, they marry, they may themselves get sick or die through similar agencies. The certain articles which they keep about them are small pieces of bone (knuckle- or artificially pointed), bits of pebble, quartz-crystal, pointed pieces of wood—anything indeed at all striking or out of the common—the stock-in-trade of one medicine-man being as a rule distinguishable from that of another. Their owner will show these *gew-gaws* as opportunities occur to other individuals and friends (not women) who can see in them a sort of guarantee as to his genuineness and respectability, and when the occasion arises can recognise to whom they belong. The doctors of the tribe may be on friendly terms with one another, and consult among themselves when necessary as to whose blood has been, or is to be, taken: i.e., the person who has been or is to be “doomed.” At heart, nevertheless, they do not trust one another: they are really a bad lot, and it is only a common fear which binds them together. Without them the effects of the charm would be harmless; sickness and death would consequently gradually disappear, and there would be a likelihood of the aborigines living for ever. As a matter of fact, lay individuals are usually afraid to tackle them: I only know of one instance where an outsider, my own black servant at *Boulia*, dared point the *mangani* at a native doctor, the latter dying about a fortnight later.

123. On the *Tully* River, the medicine-men are respected, and the other blacks would not play any tricks or larks on them, as they often do with any others in the camp.

124. (*their method of carrying their credentials*).—The doctor's stock-in-trade, charms, talismans, etc. (sect. 117), i.e., his credentials, is in most cases carried in a specially-constructed dilly-bag, slung over the left shoulder, and more or less concealed in the arm-pit.

125. *Women-Doctors*.—In the North-Western districts, though a woman dare not handle or look upon one of these charms, she sometimes knows and practises the "trick" of removing by mouth or hand (sect. 148) the particular gew-gaw which is alleged and believed to have been inserted, and to be prolonging the sickness, in the patient's body. She may herself be a doctor's wife, but on no account is she ostensibly allowed to join in the secret deliberations of the other medical practitioners. If she herself wishes to get possession of another woman's blood she may prevail, if married, upon her husband, or, if single, upon her brother to put her wishes into practical execution. Along both sides of Cape York Peninsula, and all down the Eastern coast-line, even as far as Brisbane in the early days, it is the woman who can suck out the bad blood from the patient by means of a rope or sucking-string (sect. 156).

126. *Difficulty of differentiating between truly-qualified medicine-men and quacks*.—Though it is mostly the publicly-recognised medicine-men who pursue the following practices, there are other males equally as sharp-witted who arrogate to themselves similar powers: to differentiate between the truly qualified practitioners and the quacks is thus often no easy matter—and the difficulty is only increased when one bears in mind that the effects produced by either class of individual are, for all practical purposes, identical! The mischief which these men may work—work which is almost invariably carried on at night time—can be described as follows:—

127. *Procedures employed in dooming a person: (by chants and dirges)*.—Chants and dirges are utilised not only for exorcising ailments (sect. 152), inducing sleep, etc., but also for producing various sickness and diseases, blindness (sect. 79), etc. In some districts the actual wording of the anathema may be quite simple, e.g., "Kaka (w)una nundu," of Cape Bedford (sect. 139): in others, e.g., at Boulia, the chants have been so handed down from one to another, both individually and tribally, that though some of the lay as well as the professional members of the community know several of them by rote, none of them understood their actual meaning. On the Tully River, one man will spit at another, and at the same time tell him what to do—to only emaciate and waste away, or to actually die: under the latter contingency there is no help for the victim, no cure possible. Spitting indeed is a very serious matter here, for when in quarrelling and losing their tempers, a man or woman expectorates on another, the person spat upon invariably becomes sick and thin.

128. (*by effigy*).—On the Bloomfield River, a person can be doomed by making a rough wooden effigy of him, and burying it in the ground, or by painting him on a "roarer." Portions of a person will rot away if his effigy is depicted at Cape Bedford: the illustration (Fig. 19) shows a photograph of a tree at the mission station on the northern side of the Cape, on which had been cut, some four years previously, the shape of a woman, turned upside down: this represents the life-size effigy of his wife, carved out by her husband in 1886, when she eloped with another man. [Both at Cape Bedford and on the Bloomfield, an effigy means, in addition, the public ridicule of the person in question, and in the main this was the reason of these aborigines objecting to my taking sketches or photographs of them. It is noteworthy that on the Pennefather River an effigy serves a different purpose (sect. 105).]

129. (*by imitating the action of throat-cutting, etc., with a charm*).—The Pearl-Plate forms another means of dooming a person by imitating the act of cutting his throat and ripping up his belly. It consists of a flat more-or-less triangular piece of pearl-shell with rounded angles, measuring from 1½ to 2 inches in its greatest length, from middle of base to the subtended angle to which some cement-substance, with a piece of hair-twine is attached (Fig. 20). Brought by the Workai-a tribe of Northern Territory into North-West Queensland—to Lake Nash and neighbourhood, it reaches on the one hand the Kalkadun country (Selwyn Ranges, etc.), and on the other the Upper Georgina district. The Kalkadun who call this charm Chikaleri (the name apparently for pearl-shell) used to employ it far more frequently perhaps than the mangani (sect. 144), and introduced it among the Cloncurry natives who (in 1897) practised it with the same evil intent. Through the Yaro-inga, the blacks of the Toko Ranges (west of Glenormiston country) also came to learn its uses. The procedure is for the assailant to come, ordinarily at night time, as close as possible to his intended and unconscious victim, to hold the charm by the cemented corner at arm's length, and through the air, in the direction indicated, make two horizontal and two vertical passes: the former is considered symbolical of the cutting of the throat, the latter the ripping up of the belly-wall. The Toko Ranges aborigines who apparently attach great importance to this particular mode of injury take extra precautions lest any innocent or harmless person be hurt by the too great extent of the horizontal sweep, and will therefore hold up the other fore-arm to limit it: or again, with a similar precautionary view, the performer will open his legs, tuck his head well down, and then put the charm into execution, the lower limbs limiting the movement either to the right or to the left (Fig. 21).

130. (*by burning his hair, urine, or excrement—in a charm or not*).—The Koko-minni blacks of the Palmer River employ an instrument known as Ti or Eti for injuring one another at a distance. It is formed of a piece of human shin-bone (its lower portion usually) or if not procurable, a slip of bamboo, the free end covered with cement, the whole wound round with twine, and enclosed in a Melaleuca bark covering (Figs. 22-23). Having placed some hair, urine, or excrement of the individual he wishes to injure into this piece of bone or bamboo, he burns it and so makes his victim sick. (Both the specimens which I took the opportunity of unwrapping were charred.) A medicine-man can effect a cure by taking the patient's spear and dilly-bag to the water-side where he leaves them to be devoured by a supernatural water-snake, Opo-ira, visible to himself only. He can also find to a certainty the direction whence the ti came, by going out into the bush where he will throw certain charcoal-looking pellets into the air in the direction of the four cardinal points: these will remain suspended in mid-air unless thrown in the proper quarter where only will they fall to the ground. I was informed that these pellets had been sucked by the medicine-man out of some other patient on a previous occasion. The Proserpine River natives can make a man sick by burning his excreta (sect. 80).

131. (*by touching him or his food, etc., with a charm*).—On the river below Palmerville in 1899 I came across some examples of the Marra (Fig. 24), an elongate charm formed of lengths of opossum-string, coloured red, and enveloped in tea-tree. It is not manufactured here, but brought from Union Camp (the Hodgkinson), *via* Limestone, and is evidently very much dreaded, because if it only touches the lower posterior portion of the victim, or if only stirred in any water or food partaken of by him, it will cause him to go incurably mad. At the Proserpine, the individual can be doomed by touching his food with the sweat derived from the arm-pits, crutch, etc. (sect. 80): or by placing woman's hair in his dilly-bag (sect. 77).

132. (*by inserting a charm in his food*).—There are a few charms which are believed to be actually inserted in the food. An attempt at "food-poisoning" is thus made amongst the Pennefather River natives, where the bark, fruit, or leaves of the *Exocarpus latifolia*, R.Br. (NGG. waranunuma) are crushed up into fine particles and mixed with the victim's food, which by and by kills him. These same blacks are also said to use the crushed up berries of the *Agiceras majus*, Gært. (NGG. ni-e) for a similar purpose.

133. (*by placing a charm in the ground—where he has been defæcating or micturating*).—The Proserpine River blacks can make an enemy sick by sticking into the ground, where he has been micturating, a pointed splinter made from a human shin-bone, and burying it afterwards deep under where the victim sleeps (sect. 134). The bone-pin or Chiruko of the Boulia natives is brought into requisition for producing venereal and other cognate disorders, fatal or not, which otherwise are inexplicable: there is many an aboriginal who has not yet learnt that these particular diseases are capable of transmission by sexual connection (sect. 113). Besides being used in the Boulia district, the chiruko was (in 1894) employed by the Yaro-inga along the upper Georgina River, and by the Kalkadun of the upper Leichhardt River and the Selwyn Ranges, though I only had Pitta-Pitta corroborative evidence for the latter statement: a slight variation of it was certainly in vogue among the Maitakudi of the Cloncurry under the name of Ji-go. In its ordinary form, the chiruko consists of a short emu-bone from 2 to 2½ inches, filed to a point, or perhaps the beak of the long-necked diver-bird, with a little spinifex-gum attached to its base. If placed underground with the point up, but not visible, in the situation where the victim has been expelling one or other of the products of the emunctories, he or she develops some form of venereal disease.

134. (*—or where he is likely to sleep*).—If the chiruko is similarly placed in the hut or wherever else he or she be sleeping, it may cause such a disturbance of the general health as to result even in death. The Maitakudi make their ji-go from a human arm-bone: it is of about the same size as the chiruko, but with beef-wood (*Grevillea*) gum at the blunt extremity, and when in use is hidden anywhere underneath where the victim may be sleeping. Both chiruko and ji-go can be used by the medical as well as lay fraternity, but never by women. In all cases, the assailant may be discovered either by consulting a medicine-man, or by revelation in a dream, subsequent retaliation being effected by similar means. As soon as the implement is removed from out of the ground, the sick individual makes a speedy recovery.

The burying of the bone-splinter under the sleeping ground among the Proserpine River aborigines has already been mentioned (sect. 133).

At Pine Mountain, in the Broadsound district, the death-charm was a small bone-splinter placed point upwards in the ground where the victim would be likely to sleep (*W. H. Flowers*).

135. In the districts north of the Boulia, *i.e.*, the upper Georgina River, upper Leichhardt River, and Selwyn Ranges, and at Cloncurry, a white powder, somewhat the appearance of very fine ashes, is placed anywhere in close proximity to where the victim sleeps with the object of killing him. The Workai—a people of Northern Territory it seems are responsible for its introduction here, and throughout the whole of the Boulia district, Noranside was the only place where I noted it. The Maitakudi speak of this powder as Mau-ar*, and so that the performer should not injure himself by contact, he sprinkles it where required from out of a mussel-shell. The same tribe also use a reddish powder, Manggilli, with similar methods and design, but the exact composition of either material, which unfortunately I was never allowed to see, is unknown to me. In the neighbourhood of Normanton, on the other hand, a specimen of the white powder was found to be ground glass. There is suspicion that this particular charm had its origin in the fact that in the stores of many of the western stations the large quantity of strychnine—the poisonous properties of which many of the blacks had good reason to appreciate—was generally coloured with raddle to minimise the chances of accident.

136. (*by pointing it at him*).—On the Pennefather River the death-charm or om-bo consists of a long thin bone-needle fixed into a wooden shaft—a spear in miniature. The bone from the emu's or human leg is considered more efficacious than any other. So long as the tip of the bone is not too finely sharpened it can do no harm, but otherwise it has to be kept in a tree and well covered with leaves. It is used at night, the operator (any man) pointing it at the victim, thrusting it slowly forwards with a long forced expiration, and slowly retracting it with a corresponding inspiration: it is next buried under a fire-place, whereupon the victim begins to pine away in a few days, his blood being made bad thereby. If taken in time, he may sometimes be cured by the *Erythrophloeum* bark decoction (sect. 159). Another pattern consists of three or four small bone-needles (Fig. 25) stuck into a longer handle: it works more effectively, the victim even waking from out his sleep when being pointed at. It can also be used for blinding a person at a distance (sect. 79).

137. (*by inserting it in his body through a wound, which immediately heals and leaves no visible scar*).—On the (middle) Palmer River, at the Coen, and in other portions of the Peninsula, sickness is due to some other boy having put a bone or wooden splinter into the patient. This may be done in broad daylight, the implement being thrown in the direction of the victim, who neither sees nor feels its entrance into his system. The bone-charm is a long, thin, pointed pencil, cut from a young man's shin-bone, the most potent material (Fig. 27 ABCD), or from a kangaroo (Fig. 27 E), or native-companion (Fig. 27 FGH) bone: it is from 3 to 6 inches long, the blunt end being covered with gum-cement. The

* Professor Spencer writes: "This is evidently the equivalent of Mau-ia, a term used for various forms of evil magic (amongst others a powder by means of which evil magic is carried) in some of the Central Australian tribes."

generic term for any such bone-charm is mó-kad (KMI): each being further specialised, as mar-(a young man's), ngan-dá-(a kangaroo's), and ka-va-(a native companion's) mó-kad. The patient may be cured as follows:—The medicine-man will take some water into his mouth, suck the place which is especially the seat of pain, etc., spit it out, take some more water, suck away, and finally get the charm into his mouth, sucking it so forcibly that he has to severely tap the back of his head before the implement which has done all the mischief is ejected through one of his nostrils. The bone thus removed is shown to all the other boys, but neither they nor the doctor can recognise its proper owner: it is only the patient who can do this, and by and by he retaliates on his would-be assailant in similar manner. The wooden splinters (Fig. 26) at the Coen are believed to be spear-tips (*cf.* sects. 139-140).

138. At Princess Charlotte Bay, all complaints of a serious nature, from malaria to syphilis, are ascribed to the action of a particular charm (KWA, ngai-anga) formed of a pointed piece of human fibula stuck with wax on to a reed spear. It is believed that when the spear is thrown in the direction of the intended victim, the shaft remains in the hands of the thrower, while the bone splinter travels across the intervening space, becomes lodged in the victim's body—the wound immediately closing without leaving a scar—and so causes sickness or disease. Any male can throw such a magic spear and render it effective up to a distance of 25 or 30 yards. To get cured, recourse is had to the medicine-man, who extracts the bone by one or other of two methods. After examining the patient, he sprinkles him with water out of the hollowed hand, massages him all over, especially on any extra painful spots, and is soon able to recognise, both by day or night, where the charm actually is. This he sucks out, generally from the back of the shoulders, or anywhere else that the patient cannot keep his eyes on, and the sleight of hand brought into requisition is said to be very neat. Having once set eyes on this extracted bone-splinter, the doctor can recognise its ownership, and consequently the individual who threw it. It can be easily understood that such a method will not always work successfully and satisfactorily, especially if there is plenty of light about, and the by-standers are too close. Under these circumstances, the medicine-man places the patient in position such that his feet point in the direction of a spear which he has himself hidden at some considerable distance away. Dipping a leaf of the *Ficus fasciculata* into some water which he, on this occasion, never touches with his hands, he sprinkles the water with it over the patient, and thus drives the bone-splinter out of the sufferer's body into the spear. He then goes to where the latter has been placed, and extracts the bone from it at his leisure: *i.e.*, when there are no on-lookers.

139. At Cape Bedford, in case of sickness and speedy recovery, nothing more is thought about it. But supposing there is a relapse, etc., and the patient gets pretty bad, it is believed that some one—an enemy of his—has during the dead of night doomed him by hitting him on the head with a stick (so as to account for the loss of consciousness), at the same time inserting a splinter or chip from a spear (sects. 137-140) or tomahawk in his body and then closing up the wound, so as to prevent the injury being rendered visible, saying at the same time "Kaka (w)una nundu" (*i.e.*, "sick be you"). Fortunately for the patient, however, most of the old men understand how to extract this magic splinter. The sick person for instance will leave camp, retire to a secluded spot, and catch some grass-hoppers: while engaged in eating them, one of these medicine-men will follow him up, catch hold of him, see at once in which portion of his body the spear-tip lies, and pull it out with his hand. The doctor is able to recognise to whom the spear-tip, so removed, belongs, will bury it in a swamp or throw it away in water, and the patient of course recovers.

140. A similar belief of a spear-tip (sects. 137-139) prevails on the Bloomfield River. The medicine-man will press the patient all over, and after what may be described as a kind of massage will swear that he can feel a piece of spear-tip somewhere inside: this, by some legerdemain, he will either draw out by suction, or else extract with a wommera. In the latter case he will locate the remnant of spear somewhere in the back of the patient's shoulder, etc., and then getting a confederate to place the barbed end of a wommera on the spot indicated where he keeps his hands, he tells him to give a pull—he does so, and out shoots a piece of spear-tip. The onlookers all make a rush for this, and a consultation is then held as to the ownership of this portion of weapon which they firmly believe to have been removed from inside the sufferer. Of course some poor wretch, who has comparatively few friends, or who has been making himself objectionable to the camp generally in one way or another, is pounced upon and made to answer for it.

141. On the Tully River any long wasting disease, *e.g.*, malaria, consumption, is due to Koi (the spirit of a male deceased) having put a rope into the sick person at night. This rope or twine, MAL. morakuru, is said to be made of bark-twine, either in one long piece or two tied together, and inserted through the front of the neck, just below the Adam's apple, somewhere into the chest. This rope is invisible to all except the medicine-man (*cf.* Spencer and Gillen, *op. cit.*, p. 531), who can remove it by suction, generally on the same portion of the body, *viz.*, on the left side of the upper belly, though occasionally it may be got out of the shoulder (Fig. 28), knee, or ear. The procedure requires a shorter or longer time. The doctor feels all over the surface first with his hands, and practises a kind of massage whereby he is supposed to make all the rope collect at the one spot, over which he puts his hands, edges up, and sucks in between them. He thus gets the rope out of the body into his mouth, and betaking himself to a distance, spits it out, and either burns it, buries it, or puts it out of anyone's reach. As might be expected under the circumstances, neither the patient, his friends, or any on-lookers ever see this rope so removed. On occasion, instead of employing suction, the medicine-man will remove the cause of evil by a mere manipulation of the hands, apparently pulling, twisting, and tugging at the twine which nobody but he can see. On the Proserpine River, the magic rope (tandilla) is also invisible to all except the medicine-man, who uses it at night. At one end of the string is a pointed stick, used for prodding into the victim's body to see that he is actually asleep: at the other is a loop which is thrown round the neck and tightened. Of course, this alleged strangulation leaves no visible mark next morning.

142. [In the old Brisbane days (sect. 121) it was the spirit (nguru) of the medicine-man who took the quartz-crystal across space and placed it in the victim's body. In any long illness, or with any bad pains, the crystal would be sucked out by a doctor, and the patient declare he felt much better.

There was no massage, and the quartz would not be produced unless the medical-man was sharp enough to see that the illness would have no fatal consequences. Near Rockhampton the medicine-man would remove the piece of glass (bone, etc.) from the sick person by touching him with his spear, through which it passed into his (doctor's) hair, whence he produced it (*C. Lumholtz*.)

143. (*by insertion similar to preceding methods, but coupled with the simultaneous extraction of the victim's life-blood: i. the Chichal*).—At Cape Grafton among the Kungganji, in the old days, the medicine-men or chichal-barra used to doom their victims by choking them during sleep, piercing the head with a bone-splinter (Chichal) plunged just above each nostril, taking out the tongue, and removing the life-blood (kuna-oko). The victim was said to be in a state of Kanji-i, and would die three or four days later—under no circumstances could he be cured. The life-blood, which was kept hidden amongst the roots of certain trees, possessed definite properties in that: (1) if rubbed along the inside of a canoe, the fishermen which it was carrying would have better luck, or if smeared on a wommera stuck up in the sand close to the water's edge, more fish would come out of the sea: (2) if drunk by the medicine-man he would become more clever, and be enabled to fly over immense stretches of country: (3) if partaken of by a woman, she would be permanently barren. It might be noted that the life-blood here cannot control the condition of the victim from whom it has been removed, as in the case of the mangani to be subsequently described (sect. 147).

144. (*ii. the Mangani: A. its manufactura and uses*).—Throughout the whole of North-West Queensland including the adjoining upper and middle Diamantina districts, people are doomed to sickness, accident or death by a charm known as Mangani (a bone of any sort at King's Creek) or Kambo (a flint-flake pebble, etc.) to the Boulia and Cloncurry natives, Watoko or Malta to the Kalkadun blacks, and Kalka (a spear in the more Eastern districts) to the Wunamara (=Macgillivray's Oonoomurra tribe in "Curr's Australian Race"). The implement can be manufactured by the medicine-man, or any other male individual, though were such a one to chance upon a specimen not his own property, he would wash and destroy it in case of its ever being employed to his own detriment: in the case of a woman she would immediately fall sick were she to touch or even look at it. For descriptive purposes, the charm (Figs. 29-30) may be said to consist of a pointer (b) connected by twine (c) with an elongate cylindrical receptacle (a). The pointer (PPT. *teri*, MIT. *katebrina*, or KAL. *kungga i.e.*, any pointed withe, a message stick), from 3 to 5 inches long, is made usually from one of the human fore-arm bones, or an emu bone, ground down from the blunt extremity to a gradually tapering point: among the Kalkadun, the sharpened end of this pointer is sometimes fashioned into the shape of a fish-hook (like the *ullinka* described by Spencer and Gillen, *op. cit.*, p. 536). The twine (PPT. *winnimunnari*, MIT. and KAL. *walkur*) is made of human hair or opossum-fur, or both plaited together, and varies from 3 or 4 to as much as 12 or 15 feet long: by means of cement-substance (beef-wood or spinifex) it connects the blunt extremity of the pointer with the internal surface of the base of the receptacle. The receptacle (PPT. *tau-ali*, MIT. and KAL. *wobil*) is generally formed of a piece of human arm- or shin-bone (Fig. 29) cut to a length of 3 or 4 inches and hollowed or scraped out so as to form a kind of cylinder. A human bone however, though most appreciated for the purpose, is not always at the moment obtainable, and under such circumstances may be substituted by a portion of kangaroo or emu leg-bone, a bit of bamboo-cane, (Fig. 30) a piece of old gun-barrel, or a small sheet of tin-ware rolled on itself. One extremity, the base, of this receptacle is closed in with the usual cement-substance, to which, passing down on the inside, the connecting-string is attached. Though a layman can manufacture this death-charm, it is only the medicine-man who has the power of using or "pointing" it successfully, a procedure which always takes place at night. It is most important to bear in mind that when the apparatus is thus pointed, (a) one of the doctor's gew-gaws, a quartz-crystal, bone, pebble, etc., passes from the pointer through space into the victim, while at the same time (b) the blood of the victim passes across space into the pointer and so along the connecting-string into the receptacle. It is owing to the insertion of the crystal, etc., that the victim contracts his sickness: it is owing to the removal of his life's-blood into the possession of the enemy that the latter has absolute control not only over the victim's present complaint, for better or for worse, but also over his actions, welfare, etc., in the immediate future (sect. 147).

145. In the Boulia district the mangani charm is put into execution thus:—If single-handed, and he knows that he can get to within a short distance of his victim, the medicine-man fixes the cup or receptacle of the bone-apparatus upright into the ground, while the pointer, resting along the cleft of the big toe and second digit, is directed at the person selected, the connecting-string being held in the hand, and never by any chance allowed to touch the earth (Fig. 31). Again, if single-handed, but the victim, owing to the position of his hut, or the presence of others, cannot be approached at short distance, a longer string is used: the receptacle is fixed to the stump of a tree, while the pointer, which is held in the position of rest upon a forked stick firmly planted into the ground, is directed as required (Fig. 32). Of course it is always advisable for the practitioner to work the mangani by himself, but sometimes if in doubt or unsuccessful he may call in the assistance of other medicos: in the former case he can keep the transaction secret, or between himself and his employer, in case he should not happen to be working on his own account, whereas in the latter the evil business might leak out, the danger of such a contingency being, however, counterbalanced by the fact that the full responsibility is now shared with others. Should two of them be working the instrument, one holds the pointer, and the other the receptacle. When three, four, or even perhaps five medicine-men are pointing the charm, one holds the pointer, another the receptacle, while the remainder support the connecting-string, which under these circumstances would be very much longer than the ordinary. Amongst those holding the string there may be some intimate friend of the proposed victim, and he, by means of a secreted flint, etc., will possibly secretly cut the twine while the performance is proceeding: if, on re-tying the string, it again breaks (*i.e.*, practically speaking, is purposely cut), the intended victim is spared. Though the others may have a shrewd suspicion as to which of their mates severed the cord, they find it wiser not to express any opinion publicly: they only recognise the fact that whoever did it was afraid of expressing his convictions at the secret consultation held when it was originally decided who the victim was to be. Under such circumstances the individual is spared for the present, and someone else made the scape-goat. In the Cloncurry district the manner in which the mangani is pointed by the Maitakudi doctor is similar. The receptacle is clutched between the two

knees, and the string held in the hand, while the pointer, directed in the proper quarter, is made to rest upon a branch or stick lying on the ground (Fig. 83): in low tones, so as not to notify his presence, he "sings" while pointing, but of the song he does not know the meaning. In the upper Georgina district, in addition to working the charm by one or other of the above methods, the Yaro-inga medicine-man "shoots" the pointer with a sharp push from the open palm of one hand, along the prongs of a forked stick held in the other, into the direction required: his assistant, who has charge of the connecting-string, pulls the pointer back again before it can fall to the ground.

At Bedourie, on the southern confines of the Boulia district, among the Ulupulu tribe, is met a modification in the procedure of the mangani, known as walúka, which is believed to be similar in mode and action, but can be employed between very great distances. Thus, one of the Bedourie men may have a grudge against a Boulia black, and will tell a white or a blue crane, or even a pelican, to travel the intervening space, and by "pointing" get his blood for him. Some days later, during the dusk of evening, the victim sees one of these birds and throws a stick to drive it away, but the creature being engaged on its own special business, will not budge for some little time—this very circumstance will make the observer suspicious that evil is befalling him—indeed, it will not shift or fly back again until it has collected a sufficient quantity of blood in the bone-receptacle. To make sure now that he really has possession of his victim's blood, the would-be assailant at Bedourie will send four or five other birds again to Boulia in order to glean the necessary information as to whether the individual upon whom he has sinister designs is sick or not: he is afraid to send the same bird by itself on the second journey in case it should "gammon" him. This method of obtaining an individual's blood, with the help of birds, is considered far more potent than by a mangani with the assistance of human beings. [On the lower Mulligan, etc., there is said to be an amulet which can withstand the effect of the mangani (sect. 154).]

146. Having by some one or other of the preceding methods obtained the required blood in the receptacle of the mangani charm, the medicine-man puts into it the pointer, tip downwards, around the exposed butt-end of which and the otherwise open mouth of the cylinder he fixes a quantity of cement-substance, so as to completely seal it: outside the whole concern he wraps the connecting-string round and round. Though he may swear to the presence and genuineness of the contained blood, it is difficult to learn whether the doctor has inserted some of his own, or that of some animal, or, indeed, any at all: he naturally takes every precaution, in maintaining the deception, to prevent anyone actually seeing what he does enclose in it. On the other hand, the employer—the would-be assailant—wants to satisfy himself that he really has possession of his intended victim's blood, and not that of some neutral who may have been pointed at in mistake. In company, therefore, with the medicine-man who procured it—of course, waiting a few days for suitable opportunity, so as to avert suspicion—he will leave the camp after dark, and in some sequestered spot kindle a fire, over which they warm the death-charm with its contents. Leaving the doctor to keep watch, he returns to camp, divulges his mission to no one, but enters into conversation with his proposed victim on any ordinary everyday topic, watches most carefully to see if he is at all sick or not, and may casually get him to admit that he is feeling a little tired or is a bit out of sorts. This admission, simple as it is, constitutes ample proof that his blood has actually been obtained and is now under control, but the visitor says nothing, though he thinks a lot, continues the conversation on ordinary everyday topics, parts on apparently friendly terms, and sneaks back to the medicine-man, whom he informs exactly as to what has taken place. Supposing that the wrong individual's blood has been caught, *i.e.*, the wrong person pointed at,—and this is judged to be the case when not the slightest sign of sickness is discoverable—the medico breaks open the top of the receptacle, which he rinses out, and washes well in water, so as to admit of its being used again in another attempt.

147. (B.—*Possession of the life-blood in the Mangani means absolute control over the individual from whom extracted*).—But if everything is satisfactory, and the blood of the individual required has been really (as is believed) obtained, the one in possession has only to warm the death-charm again over the fire to make his victim more sick: to destroy it in the flames to make him actually die: or to rinse it in water and rub fat of any description over it to put him all to rights again (*cf.* sect. 143). But more than this, he can talk to the captive blood, and tell its late owner to become sick in a particular way, to meet with a certain accident, *e.g.*, the fall of a tree, to be struck by lightning, to be killed by a snake, or anything else *ad libitum*.

(C.—*The victim of the Mangani can even be ordered to die from snake-bite*).—Indeed, when a fatal issue follows snake-bite, which apparently only rarely happens, and in such cases the purely natural cause and effect are not reconciled, the death-charm throughout the whole Boulia district is blameable as a matter of course. It is believed that when the patient's blood is originally caught in the charm, the medicine-man seals up with it a small snake which is told what to do: and that the apparatus is finally smeared with fat. The predestined victim may depart as usual on some hunting expedition, and become fully occupied in the excitement of the chase, when he suddenly feels something at his leg or foot, and sees a snake just in the act of biting him. Strange to say, this particular kind of snake will now immediately disappear: it does not crawl into the ground, or hide away under a tussock or stone like any other common or ordinary snake would do, but actually vanishes into space. By this very process of invisibility the person bitten recognises that some enemy has been pointing the mangani at him, and that through this form of it he is sure to die: nothing can possibly save him. He makes no effort in fact to apply a remedy (sect. 164), loses heart, gives way, and lies down to die (sect. 118). Supposing his wife to be present at the time of the occurrence, she will run back to camp as fast as possible and tell one of the doctors. The latter, from a careful cross-examination as to the nature of the bite, the variety of the snake, and the condition of the patient, will soon gather all the information he requires, and then glance up at the skies to see if Malkari is spitting or not: if he fails to recognise this nature-spirit expectorating from above, he tells the poor woman that some mortal must have got her husband's blood, using this particular form of the mangani to effect his purpose, and that it is impossible to save the patient's life. Furthermore, the medicine-man referred to will, at some future time, tell her who actually did the mischief, *i.e.*, doomed her husband: when she knows this, she will tell her brothers and other kindred, who may then take the necessary steps to avenge the death.

148. (D.—*The person doomed by the Mangani has the means of discovering his assailant*).—The patient at whom a mangani has been pointed, *i.e.*, the person doomed, is not without the means, in these North-Western districts, of discovering his would-be assailant. He either consults a friend or relative, who may possibly mention the name of some poor wretch upon whom he—the friend—may have a “down,” or else sees the culprit in a dream, or, best and most satisfactory method of all, he takes the advice of a medicine-man. After making some sort of a present, the latter is asked to discover the assailant, and possibly the name may be divulged straight away. More often, however, the doctor is not quite such a fool as to commit himself so readily, but exercises his power of removing from within the patient’s body the actual pebble, crystal, bone, etc., which the would-be murderer had got another medicine-man to invisibly insert there. Having inquired where the bodily pains are most marked, etc., he sets about rubbing or massaging the affected parts, perhaps rinsing his hands in water at intervals. He may also blow upon the patient’s chest, take some water into his own mouth, and spit it out again, and may even apply his lips in the act of suction to that portion of the patient’s anatomy most complained of (*cf.* sect. 141). At any rate, in a short time he certainly contrives, by a kind of sleight of hand, to get some pebble, quartz, etc., into his hand, or more usually into his mouth, which the patient, as well as anyone else who may be present, implicitly believes he has managed to draw out from the part of the body affected. The exact manner in which this bit of pebble, etc., which, as these natives firmly believe, has been causing the mischief, is suddenly made to put in an appearance, is certainly very puzzling, even to Europeans: at any rate there it is, and the sick individual, provided he has sufficient faith, may accordingly feel better. If no improvement in his condition follows, he is quite resigned in the knowledge that his case is hopeless, and he accordingly calmly waits for Death to release him (sect. 113). Even if he should feel better, after the medicine-man’s treatment, he realises that his life nevertheless remains in danger, owing to his blood having been caught and in the possession of his enemy. But how is the enemy to be discovered? Well, the particular crystal, stone, etc., thus apparently removed from his inside must have been placed in the part complained of by some other and rival doctor. The present consultant, therefore, examines it most carefully, and tells him to which member of the profession it belongs—that is, who did the actual mischief: he says he will now try and discover the really guilty party—the one who instigated the deed, the original employer, the one who caused him to be doomed. The medicine-man is only regarded as the agent of the employer, and not as being in any way culpable: it is the doctor’s livelihood to carry on these practices; indeed, that is what he is here for—so why blame him? In the meantime, the medicine-man has a private talk with his fellow-practitioners, and will suggest some personally obnoxious individual, but the latter may have some friends at court, and the idea is scouted: at all events, amongst themselves they secretly decide upon some individual who has perhaps been causing trouble of one sort or another in the camp, and all agree in making him the scape-goat. When the doctor returns to his patient, it is the name of this individual which he divulges as that of the enemy who originally made him sick. How the enemy is dealt with, it is sufficient for present purposes to state that his blood is similarly caught; and now that each is equally in the power of the other, they either keep out of each other’s way in mutual distrust, and finally either make friends, or else fight to a finish.

149. (E.—*Comparison of the Mangani with other charms*).—When first making inquiry into the procedures connected with the mangani in north-west Queensland, I was very much struck with the complexity of ideas which its orthodox manipulation entailed: indeed, it was not until after I had completed many an investigation on similar matters in other districts that I recognised in this highly-developed form of charm several remarkable resemblances to superstitions commonly accepted elsewhere. Taking each constituent of the mangani separately, I would accordingly draw the reader’s attention to the more important of these analogies:—

(a) The bone-pointer—

A charm complete by itself: as a wooden spear-tip at Cape Bedford (sect. 139), Bloomfield (sect. 140): as a bone-pin on the Proserpine (sect. 133), at Pine Mountain (sect. 134), Palmer and Coen (sect. 137), Boulia (sect. 133): a miniature spear on the Pennefather River (sect. 136). From the fact of the pointer thus originally indicating a spear, the projection-forwards movement (sect. 136, 144, etc.) is rendered intelligible in the same way that where the instrument of death represents a knife, as in the Pearl-Plate (sect. 129), the movement is vertical or horizontal.

(b) The (human-hair or opossum-fur) connecting-string—

A charm complete by itself in the marra of the Hodgkinson (sect. 131), the “invisible” rope of the Tully and Proserpine (sect. 141): the sucking-strings (sect. 156) and ligatures (sect. 155) for alleviating sickness: the medicine-man’s hair (sect. 142) into which the pebble, etc., from the sick person passes per medium of a spear.

(c) The bone (or bamboo) receptacle—

A charm complete by itself in the Ti or Eti of the Palmer (sect. 130): the luck-charm of Cape Bedford (sect. 110), Princess Charlotte Bay (sect. 109), etc.

(d) The extracted life’s blood—

Has no control over victim from whom extracted, but has special properties (sect. 143). The treatment of this in the mangani by fire, etc., is similar to that, with similar purpose, applied to hair, urine, excrement (sect. 130): in this connection, note also the insertion of the bone-pin in the place of defæcation (sect. 133).

(e) The inserted quartz-crystal, etc.—

A charm complete by itself at Cape Bedford (sect. 110), Bloomfield (sect. 111), Brisbane (sect. 142), Cape York (sect. 109), and elsewhere: believed to be a bone at Cape Bedford (sect. 110): obtained from the inside of a medicine-man at Boulia (sect. 118), Brisbane (sect. 121), etc., or nature-spirit connected with water at Boulia (sect. 118): connected with rain at Roxburgh Downs (sect. 19), or a rainbow at Brisbane (sect. 121).

(f) The method of suction for removing the latter—

Similar to that on Tully River (sect. 141): *cf.* sucking-string (sect. 156), etc.

150. Disease and Accident: Produced by the Victim's Own Fault.—*Directly due to disobedience of certain rules of conduct, breaking of "tabu," etc.*—All sickness and accidents which are not ascribable to wilful damage at the hands of an enemy, are referred to the individual's own fault, either directly or indirectly. Disobedience to certain accepted rules of conduct, the breaking of "tabu," the neglect of certain recognised precautions, etc., are all productive of ills for which the sufferer has only himself to blame. Thus, if a Boulia black will rape unprotected females in the bush, he must take the consequences, and put up with his blindness (sect. 79): if a Tully River native persists in walking about the scrubs by himself alone, as he is continually being warned not to do, he cannot be surprised that Koi (sect. 65) has punished him, when he begins to feel sick a day or two later: if a Pennefather River black cut down a tree where Cho-i is believed to be in hiding, the latter will be sure to have his revenge (sect. 116): if a Bloomfield aboriginal will camp in the neighbourhood of a Yirru (sect. 116) he must put up with the consequences—some grievous sores. So, again, in the breaking of "tabu," if the individual wilfully speaks of the name referring to someone deceased, he will have to abide by the result and submit to any mischief which the spirit of such person thus called upon may inflict: if he purposely eats certain forbidden dietaries—well, let him put up with the consequences. By neglecting to take proper precautions for preventing urine being burnt (sect. 80), is it matter for wonder that he becomes troubled with sore eyes, or with ulcers elsewhere? If he neglects the warning (sect. 74), who but himself alone is to blame if he is caught by a snake or a crocodile? An old Tully River man candidly admitted to me that the sickness from which he was suffering was due to his neglect in not looking properly after a corpse which had been placed in his charge.

151. Indirectly due to the actions of his children or parents.—Certain ailments indirectly referable to the individual himself are explicable through the actions of his children or his parents. He may suffer grievous sickness by his child pointing at its own shadow, etc., in the moonlight (sect. 5). Any congenital deformity is due to his mother having been told to get pregnant by the wrong person, or to her having eaten some forbidden dietary during pregnancy (sect. 95). It was his own fault that before getting into his mother's womb he fell over a log (sect. 83). To account for "growing pains," any continued weakness, etc., his poor mother is blamed for not having looked after him properly when a child, *e.g.*, neglecting to put his excrement out of harm's way (sect. 80), burying the navel-string too soon, *i.e.*, before he could walk (Pennefather River), omitting to rub him properly over with charcoal after birth (Cape Grafton), etc. [*Cf.* Naming of children after deformities, etc., in their parents: sect. 71.]

152. Various remedies, medicines, etc., are resorted to.—Now it is to combat all such diseases and infirmities as are not wilfully produced by witchcraft, doom, etc., at the hands of an enemy, that certain remedies—chants, amulets, ligatures, sucking-strings, medicines, lotions, etc.—are had recourse to. It is, nevertheless, true that all complaints with which mankind is afflicted may be treated on one or other of the following lines, and it is only when the treatment ultimately fails that the true cause of the disease is discovered, the action of the particular charm recognised, and the aid of the medicine-man, etc., called in (sect. 148, etc.).

153. A. Chants.—The use of chants and dirges for curing ailments has already been drawn attention to (sect. 127).

154. B. Amulets, in a true sense, have so far only been met with in the western districts. A rather rare one, the Manda-kuya (*cf.* manda = to kill with a mangani, kuya = stone or stone-knife) is of a flattened spindle-form, about 5 or 6 inches long, made of emu feathers which, after being placed lengthways and bundlewise, are wound round and round with opossum-string, and then coated all over with red-ochre grease: a slender piece of bone of some sort is occasionally enclosed in its centre. Originally, in the olden days throughout the Boulia district, this was used as a sign of good faith to be forwarded to some other friendly tribe whose assistance was required in fighting a common enemy: in those times there was but one of them in each camp, and the privileged individual used to wear it on his chest, over which it would hang by means of a string passing round the neck. Subsequently this Manda-kuya came to have remedial properties attributed to it, and, worn in similar position, has been gradually imitated and supplanted by the more common woraka.

This Woraka (Figs. 34-35) is more rounded than the preceding, and accordingly can be described as cigar-shaped: it may similarly be painted entirely red, or else in transverse bands of red and yellow alternately. Worn over the chest it is used to relieve obscure pains, a troublesome cough, etc., and, as a survival, may still be utilised for collecting aid in case of warfare. The woraka, its Boulia district name, is known as Yuleri by the Kalkadun, who also manufacture it; indeed, it is believed to have been introduced originally to the latter by their Northern neighbours, the Workai-a.

The Minma, Mintara, or Maltara, consists of a bundle of emu-feathers, either tied up loosely with opossum-string or enclosed in a curved spindle-shaped net (Fig. 36) tied on anywhere where pain may be: for instance, over the forehead for head-ache, round the belly for stomach-ache, etc. It is met with among the Boulia blacks, as well as north of them in the Kalkadun country.

[Along Eyre's Creek and the lower Mulligan, the effects of the mangani charm are stated (*C. P. Rich*) to be counteracted by a particular form of circlet (Fig. 37).]

The exposure of colours with the object of averting certain impending dangers (sect. 116) might again be noted here.

155. c. Ligatures of human-hair, opossum-fur, or occasionally fibre-twine, are very commonly employed in any forms of pain or sickness. In the early Brisbane days (*T. Petrie*) whenever a person, male or female, was out of sorts, an opossum-string was tied round the wrists and ankles. In the Boulia district, and on the Palmer, human-hair twine is similarly tied on anywhere, arms or legs. Among the Keppel Islands, in the Rockhampton district, and at Princess Charlotte Bay, the human-hair string is tied tightly on the particular spot wherever the injury or pain is supposed to be: *e.g.*, round the forehead for headache, round the belly for stomach-ache. (The hair-cord used on Keppel Island is quite three-eighths of an inch in thickness.) On the Palmer River, in place of hair, the Koko-minni may employ twines made from the *Acacia leptocarpa*, *Acacia lysiphlaea*, and *Sterculia diversifolia* for similar purposes:

so again, the natives of the Tully River use strips of lawyer-cane (*Calamus*), pieces of bladey-grass (*Imperata*), etc., for tying round any painful portions of the limbs, while the Cape Bedford blacks use the *Xerotes longifolia* specially for tying up sores and abscesses on the arms and legs. E. Palmer says that the inside bark of the *Eucalyptus pruinosa*, Schau., is "stripped, wound round the chest and body very tightly, and damped with water for pains, rheumatism, etc., the sufferer sitting down in water at the same time."

156. d. Sucking-strings.—On both coasts of the Peninsula, and along the entire eastern sea-board as low down as Rockhampton (even Brisbane in the old days), the custom prevails of sucking out the alleged bad blood by means of a human hair, opossum-fur, or fibre-twine. The practice is generally confined to the women, and varies but slightly in different localities:—On the Pennefather River where it is specially employed for relieving pain, and tied round the part affected, the free extremity of the cord is rubbed (Fig. 40) across the woman's lower lips (behind the teeth) from side to side until they begin to swell and bleed: this bad blood which is believed to actually come from the invalid is then spat out. With such energy and determination is the performance gone through that the poor gin's mouth will often be in a terrible state for weeks after. The hair-rope is manufactured by women only, and has sometimes woven into it the gaily-coloured feathers of the blue mountain-parrot the NGG. name of which is Mandenuto, and hence the string (Fig. 39) is often called by the same term. The sucking here is always done by females: if a man is sick, by his sister, or in her absence by his mother: if a child is ailing, the mother does it. The bad blood alleged to have been removed is, in the case of males, spat into a shell, and thrown into a creek, swamp, or other water: in the case of females it is buried in an ant-hill. At Cape Bedford, the sucking-string is made of kangaroo- or wallaby- hair, and has the special name of Dorlkun applied to it. On the Bloomfield River some of the old women, or some of the "doctors," will take a piece of bark twine attached to the one extremity of a spindle-shaped piece of beeswax, the other part being stuck or held on by the patient to that portion of his body which he considers most affected: the operator then takes the free extremity of the string in his mouth and with both his hands rubs it briskly from side to side over the lower lip, behind the teeth, until the blood comes, and then spits it out. He takes some water into his mouth, and after a time expectorates more bloody froth. Sometimes both ends of the string (Fig. 38) are attached each to a piece of beeswax: in such a case, both ends are held or placed alongside the painful spot by the patient himself, the old woman or the medicine-man "drawing" the blood with the centre of the string. At the Proserpine, the string (Kupara) was made from bark, and sucked by women only. Throughout the whole Rockhampton district, from Marlborough on the north to Miriam Vale, below Gladstone, on the south, as well as on the outlying Keppels, sickness of various kinds and degrees is relieved by tying the twine (made of Acacia, etc.) round and round the patient's breast and chest, a woman sucking at its free end as before, and spitting it out. At Brisbane (*T. Petrie*) it was an opossum string that was wound around the patient's (male or female) body, and a bark trough, etc., with water, into which the old woman spat: she continued the treatment until the liquid became quite bloody.

157. e. Inorganic remedies.—Swamp-mud, NGG.mbrú-i, is eaten for stomach-ache by the Pennefather River natives. In the Boulia district, huge clay or mud pills, one or two at a time, are prescribed for diarrhoea: these pellets are at least twice the size of pills seen at any pharmacutists. Salt water is drunk by the coastal blacks around the mouth of the Tully as a cure for coughs and colds.

158. f. Animal preparations.—Green ants and their larvæ constitute a very common remedy everywhere when anyone feels out of sorts with anything from diarrhoea up to coughs and colds: these insects may be eaten raw or after preparation (Roth: Bulletin No. 2, sect. 10). Drinking the oily mess derived from boiling a young sting-ray's liver with water, in a *melo* shell, is considered a cure for constipation on the Pennefather. Human blood throughout North-Western Queensland may be drunk in various obscure affections: it can also be employed externally (sect. 160). Certainly in the Boulia district, after the multi-copulation of the young female, during the first initiation ceremony, the seminal fluid obtained from her is collected into a wooden trough, mixed with water and drunk as medicine: should there be no sick fellows in camp it may be preserved in the vessel until required. On the Palmer, the Koko-minni employ seminal fluid externally (sect. 160).

159. g. Vegetable preparations.—The following is a list of plants believed to have remedial properties: as it has been found convenient, for reference purposes, to include in it certain plants used externally, the latter are distinguished by an initial asterisk:—

- * *Ægiceras majus*, Gærtn.—Leaves squeezed or boiled, and the juice or fluid dropped in the ear for ear-ache (for females only). NGG, ni-e. Pennefather River.

[The bark has an extremely nauseating acrid taste, which, according to Dr. T. L. Bancroft, is due to a saponin which is present in a large quantity.—*J. H. Maiden*.]

- * *Alphitonia excelsa*, Reissek.—Leaves laid on the eyes when sore. NGG, an-na. Pennefather River.

Alsophila australis.—The stalks of the young leaves of this tree-fern are roasted and eaten as a tonic after any form of sickness. MAL, kalojo. Tully River.

- * *Andropogon bombycinus*, R. Br.—Whole plant is soaked in water which is thus made to smell, when it is washed into sore eyes. KMI, angá-ina. Palmer River.

[Most of the Andropogons have aromatic roots, and are thought by uneducated people to have medicinal properties.—*J.H.M.*]

- * *Barringtonia racemosa*, Gaudich.—On the Bloomfield River the bark is hammered and dipped into boiling water, and dabbed all over the sick person. Used in non-venereal stricture. (*R. Hislop*.)

[In India an extract or juice is obtained from the leaves of the *B. acutangula*, Gærtn., which, when mixed with oil, is used in native practice for eruptions of the skin.—*J.H.M.*]

Calamus caryotoides, Mart.—On the Bloomfield River, the young shoots, when eaten, are believed to cure head-ache. (*R. Hislop*.)

- * *Calophyllum inophyllum*, Linn.—Nut broken, kernel triturated with red pigment on stone, mixed with water, and then rubbed all over patient's body, especially where pain is. KUG, balpuro. Cape Grafton.

[The oil is used in India as an application in rheumatism, etc. Dymock in his *Materia Medica* of W. India says the natives gather the greenish resin and hence must consider it of medicinal value, although he has been unable to ascertain its value.—J.H.M.]

- * *Canarium australasicum*, F. v. M.—Its very resinous bark is put into water where it is rubbed and broken up so as to form a milky solution: after removal of the solids, the fluid is drunk for diarrhoea and stomach-ache. NGG, atamba. Pennefather River.

- * *Capparis uberiflora*, F. v. M.—The reddish outer bark of the root is scraped off, the resulting shavings being then soaked in water. The mixture is used for dabbing on to sores and scratches on the legs. NGG, drortara. Pennefather River.

[*Polanisia viscosa*, DC., also belonging to the Capparidæ, is used by the aborigines to cure head-ache (Mr. H. W. Stone, quoted by Mr. Bailey): it is also used in Cochin China as a counter-irritant, in the same way as sinapisms in Europe, and also as a vesicant; and in the United States the roots are said to be used as a vermifuge. In India the leaves boiled in ghee are applied to recent wounds, and the juice to ulcers. . . .—J.H.M.]

- * *Careya australis*, F. v. M.—The Kundara blacks of the lower Gulf coast boil the bark, and rub the decoction all over the body when anyone is sick, or out of sorts.

- * *Cassytha glabella*, R. Br.—The bark is made into a sort of tea by soaking it for some time in water, when it is drunk in cases of high temperature. The leaves are sometimes treated in the same way as the bark. NGG, tim-reddi. Pennefather and Batavia Rivers.

[*C. fliformis*, Linn. The whole plant pulverised, and mixed with dry ginger and butter, is used in the cleaning of inveterate ulcers in India. The juice of the plant, mixed with sugar, is occasionally applied to inflamed eyes (Rheede). It is used in native practice as an alterative in bilious affections, and for piles (Dymock).—J.H.M.]

- * *Cymbidium albuciflorum*, F. v. M.—The bulb of this orchid is chewed for dysentery. MAL, bungkiam. Tully River.

[The pseudo-bulbs of all *Cymbidiums* have been used for dysentery, either chewed or with the starch extracted, so as to form a coarse arrow-root.—J.H.M.]

- * *Erythrophloeum Labouchei*, F. v. M.—Outer bark is put into water for some hours, and the solution rubbed into the spear-wound, the surrounding skin of which it appears to dry up. In cases of general malaise, etc., the solution is rubbed all over the body. NGG, naumuta. Pennefather River.

[Said to contain Erythrophloëin, the active principle of *E. guinense*.—J.H.M.]

- * *Eucalyptus corymbosa*, Sm.—The gum of this "blood-wood," PPT, richindi, is used both as a local and internal application for venereal sores: in the former case it is used as a powder and dusted on, in the latter it is boiled with water. In the Boulia, Cloncurry, Upper Georgina, and Leichhardt-Selwyn districts.

- * *Eucalyptus microtheca*, F. v. M.—The inside bark is beaten up and used as a poultice for snake-bites, heated. Cloncurry, etc. (E. Palmer.)

- * *Eucalyptus pruinosa*, Schau.—The inside bark is stripped and wound round the chest and body very tightly, damped with water, for pains, rheumatism, etc., sitting down in the water at the same time. Cloncurry. (E. Palmer.)

- * *Eucalyptus resinifera*, Sm.—The Kundara, of the coast-line between the Staaten and Nassau Rivers, boil the leaves and drink the decoction, and also rub the inner bark into the sores, in syphilis. KUN, mitar.

- * *Eucalyptus terminalis*, F. v. M.—The gum, mixed with water, is used for constipation on the Palmer. KMI, ga-ja.

- * *Eucalyptus tessellaris*, F. v. M.—Bark soaked in water, and drunk for dysentery on the Palmer. KMI, r-gú-la.

- * *Eucalyptus tetradonta*, F. v. M.—The leaves of the young trees are bruised and rubbed in water in a wooden trough with the hands till the water is green and thick, when it is drunk for fevers and head-ache. Mitchell, Gilbert, and Norman Rivers. (E. Palmer.)

[The *Eucalyptus* leaves, barks, and gums (Kinos) as quoted above are so used, I think, because of their availability. But I see no special merit in any of them. For example, *E. resinifera* is a very poor yielder of oil, and it is to the oil that the leaves owe their therapeutic value. . . .—J.H.M.]

- * *Euphorbia*.—Various species are very frequently used for relieving difficult or painful micturition. Boulia.

[*Euphorbia*, *Excæcaria*, and *Phyllanthus* all belong to *Euphorbiaceæ*, and our knowledge of the three genera will be found summarised in Mr. J. H. Maiden's pamphlet, already referred to.]

- * *Excæcaria parvifolia*, F. v. M.—For pains and sickness. The natives use the bark mashed up in water in a wooden trough, and heated with stones from a fire close by. The wash is applied externally to all parts of the body, rubbing it in. Cloncurry, Mitchell Rivers. (E. Palmer.) [See *Euphorbia*.]

- * *Ficus scabra*, G. Forst.—The milky juice of the young shoots is employed by the natives medicinally, and is represented by Murrells, from personal experience, to be very efficacious in healing wounds. After the application of the milky juice. . . the scraped root-bark of the *Grewia*. . . is used as a poultice to the wound. Cleveland Bay. (A. Thozet, quoted by E. Gregory.)

- * *Gnaphalium luteo-album*, Linn.—Used medicinally for general sickness, as a drink. Mitchell River. (E. Palmer.)

- * *Grevillea striata*, R. Br.—The charcoal of this is employed to stop the hæmorrhage in certain spear-wounds.
- Grewia polygama*, Roxb.—Around Normanton, etc., is used by (both whites and) blacks for dysentery: the leaves are either chewed or made into a decoction.
- Heliotropium ovalifolium*, Forsk.—Bruised in water it is used as a drink and wash, the head and body being rubbed over with the dilution. (*E. Palmer*.)
[A poisonous alkaloid, Heliotropine, has been found in the European *H. europæum*, L., and in the closely allied *Cynoglossum vulgare*.—*J.H.M.*]
- Hibiscus* sp.—Made a decoction of, and used, for same purposes as the *Mentha australis* (*q.v.*) MIT, yukata. Cloncurry district.
- Ipomœa angustifolia*, Jacq.—Whole plant chewed in mouth, or soaked in water, and then placed on sores. NGG, rambata. Pennefather River.
[The boiled leaves of the closely-allied *I. Pes-capræ*, Roth, are used externally as an anodyne in cases of colic, and in decoction in rheumatism; the juice is given as a diuretic in dropsy, and at the same time the bruised leaves are applied to the dropsical part. (Dymock, *Materia Medica of Western India*)—*J.H.M.*]
- Loranthus Quandang*, Lindl.—The leaves are bruised in water, and drunk for fevers. (*E. Palmer*.)
- Melaleuca leucadendron*, Linn.—The young leaves are bruised in water, and drunk for headaches, colds, and general sickness. Mitchell, etc., River. (*Ibid.*)
[The *Melaleuca* leaves contain Cajeput-oil.—*J.H.M.*]
- Mentha australis*, R. Br., is drunk in the form of a decoction, like tea, with apparently very beneficial results in coughs or colds. PPT., pokangadyi. N.W. districts.
- Moschoama polystachyum*, Benth.—Used as medicine for fevers, etc., by mixing in water. Mitchell, Flinders Rivers. (*E. Palmer*.)
- Ocimum sanctum*, Linn.—The leaves are crushed up in water, and drunk for fevers and sickness. Cloncurry, Mitchell Rivers. (*Ibid.*)
[This plant is much cultivated in India and Ceylon, and is frequently used in medicine in the latter country (*Treasury of Botany*.) Stimulant, diaphoretic, and expectorant virtues are assigned to it by the natives. (*Pharm. of India*)—*J.H.M.*]
- * *Phyllanthus urinaria*, Linn., var. After chewing in the mouth, or soaking in water, the leaves are rubbed into and placed on the cuts made on top of the forehead for relieving congestion of the head. NGG, te-mo. Pennefather River. [*See Euphorbia*.]
- Plectranthus congestus*, R. Br.—Leaves and branches crushed in water and drunk for internal complaints. Mitchell River. (*E. Palmer*.)
- * *Polanisia viscosa*, DC.—The whole plant is smashed up in the dry, and placed on boils or open sores. NGG, a-nga. Pennefather River.
- Pterocaulon glandulosus*, Benth. et Hook.—By the Koko-minni, the leaves are used for stuffing up and rubbing over spear-wounds in the legs or arms. By the Kundara, for headache, the leaves are either just smelt as they are, or else boiled in water and drunk. (*E. Palmer* states it is used as a fever medicine.) KMI, alwormangká-ina. KUN, warrau.
- Sarcocephalus cordatus*, Miq.—The Koko-minni break up the bark: if eaten, it produces vomiting, and is employed for curing "sore belly" and certain snake-bites. KMI, po-anja.
[It has a bitter bark, long known to bushmen, and used by them occasionally in the form of an infusion for ague, in default of quinine, but with no good results, as far as I could ascertain. Extract of the bark, which is very bitter, had apparently no effect on frogs. . . . (Dr. T. L. Bancroft, "Pharm. of Some Queensland Plants," 1889, p. 2.)—*J.H.M.*]
- * *Striga curvifolia*, Benth.—The whole plant after being chewed in the mouth or soaked in water, is rubbed into the sores in certain cases of skin-disease. Pennefather River.
- * *Tabernamontana orientalis*, R. Br.—Fruit rubbed on sores, to heal them. KUG, pallabara. Cape Grafton.
[This small tree has an intensely bitter bark, and a decoction of it is sometimes sold as "bitters."—*J.H.M.*]
- * *Tribulus cistoides*, Linn.—Kept in between the gums and cheek, along the base of a bad tooth, to relieve pain in tooth-ache. NGG, dardatra. Pennefather River.

In the Boulia district, the belief is pretty common that any strong-scented plants are of value for sniffing at in cases of headache, and that any sort of grass or shrub growing near the water's edge will relieve difficult or painful micturition.

160. H. Liniments, lotions.—Throughout North-Western Queensland human blood is used for smearing all over the body, trunk, limbs, and face, in various obscure affections, and internal pains of one sort or another. The blood itself is removed from any other apparently healthy individual, but never a woman, in one or other of the two following methods:—With a string or other ligature tied tightly round and above the main prominence of the biceps muscle, the elbow is either strongly flexed, or while made to press upon something behind, equally strongly extended: in the former case, the incision with the stone knife, etc., into the posterior ulnar vein, the blood-vessel usually cut, can be made by the individual himself, in the latter by some other person. The blood is collected into a wooden trough, and the wound, dressed with fat, bound up with a leaf or two. By means of a bundle of emu feathers the blood thus obtained is dabbed all over the patient from head to heels, while his gin or some male friend, more usually the former, rubs it in with the flat of the hands, the massage, such as it is, lasting often well over a-quarter of an hour. In addition to the external application of the remedy, the patient may drink some of it. (Immersion in water for hours at a time is a common remedy everywhere for all varieties of fever.)

In these same districts, sweat removed from under the arm-pits, and smeared in a manner similar to the blood, is also believed to have wonderful curative powers, especially when the patient is in extremis (sect. 80).

On the Palmer, any individual, not necessarily a medicine-man, will cure fever and similar ill-understood complaints by smearing over the patient's head a mixture of water and human seminal fluid. A similar belief in the Boulia district (sect. 158).

Fat, from the iguana, snake, etc., may also be employed as a liniment for rubbing over tired or aching limbs, and in such circumstances affords apparently speedy relief.

Another common method of treatment, in fevers and other obscure cases, by the Palmer River women, is for them to thoroughly massage the patient all over with a green "mush" formed of *Melaleuca* leaves soaked in water: the bark from the under-ground roots of the same tree may be used conjointly with, or separately from, the leaves.

Various lotions derived from plants have already been recorded (sect. 159).

On the Bloomfield, the young women suffer from an affection of the foot and toes. There is first of all an inflammation and swelling of the toes with adjacent portions of the foot: this is then followed by a contraction and concurrent cracking of the skin, starting from the forks of the toes, and extending up to quite an inch on to both dorsal and plantar surfaces of the foot: the complaint sometimes proves fatal owing perhaps to blood-poisoning. At any rate, to remedy the disease, the girl will pour her younger brother's urine over the sore places. (*R. Hislop.*)

The Kalkadun, of the upper Leichhardt River, and the Selwyn Ranges, in addition to the usual blood-liniment, apply a method, without rubbing, wherein the whole body, head included, is covered with red ochre. In other districts, white paint or mud may take the place of the red.

161. J. Poultices, fomentations.—At Princess Charlotte Bay, bruises, sprains, aches, and pains in general are all treated with poultices, or rather fomentations: the *Erythrophlæum*, *Eucalyptus* or other bark, after being boiled into more or less of a pulp, is held by the hand on to the part affected—I never saw or heard of its being tied on. In the North-Western districts, the only application of a poultice that has come under my observation, is the practice prevailing among the Maitakudi of Cloncurry for the cure of a bad headache: some Eucalypt bark, subsequently to being hammered and pounded, is simply soaked in water, and the mass so produced held by the hand on to the part affected with a piece of bark, etc.

[To lay the aching head between two heated stones covered with an opossum rug was a cure adopted by the Brisbane blacks (*T. Petrie*).]

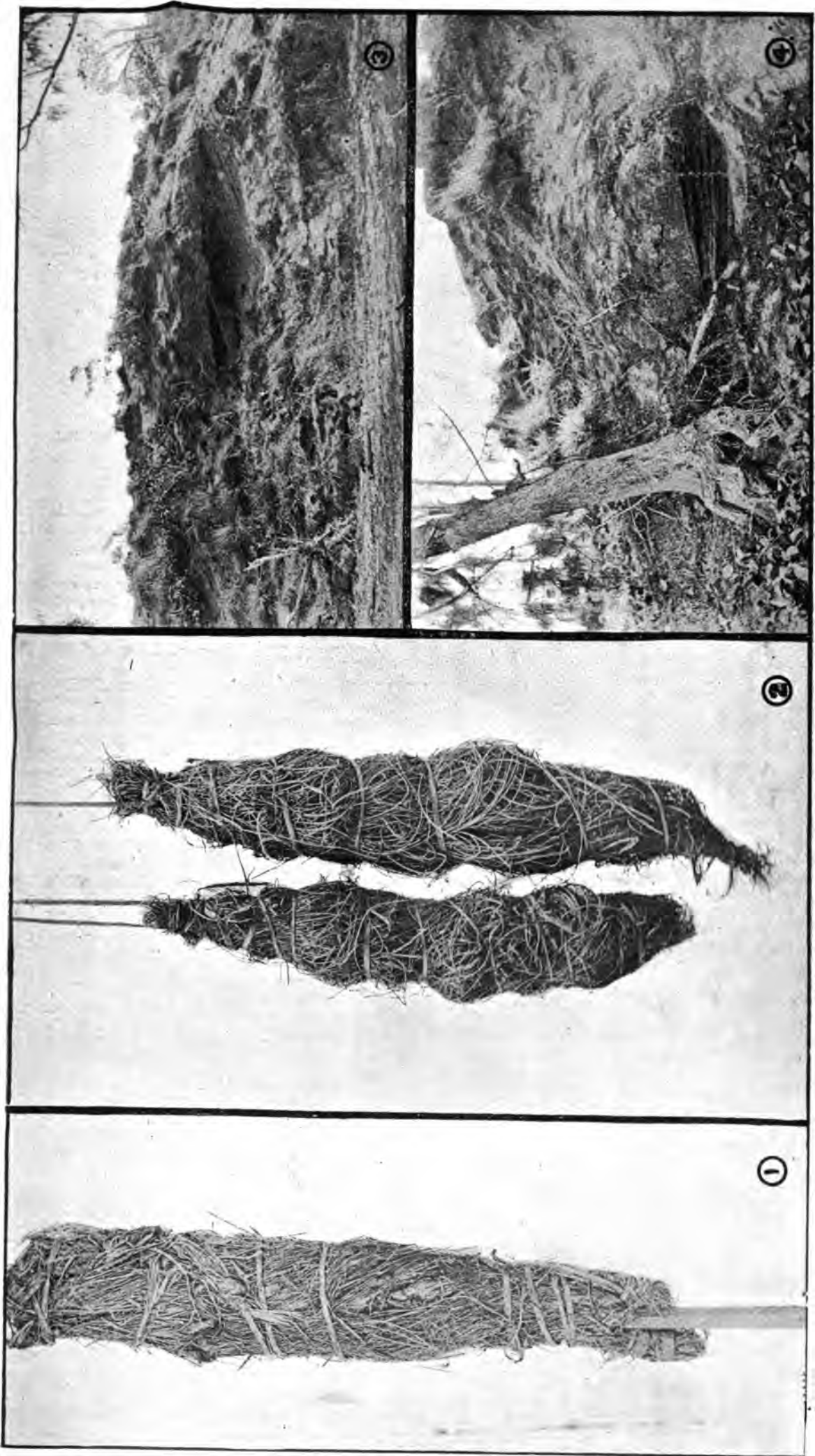
162. κ. Bleeding by means of superficial incisions made with stone-knives, etc., is not infrequently practised over an inflamed and painful knee or shoulder joint in the North-Western districts. Similarly, gashing the top of the head, from behind forwards, is a very common form of treatment for fevers at Cape Grafton. This is also the cure for head-ache on the Tully River, but here the wounds are in addition covered with a piece of bark, and the bark hammered by a sympathetic friend with a stick. [In the old Brisbane days the same complaint was treated similarly by a waddy, but without the cuts or intervening bark: another cure for the trouble was for the patient to go under water and force himself to remain below the surface as long as he possibly could. (*T. Petrie*). The most extraordinary treatment of head-ache is that which the Koko-minni practice on the Palmer:—The sufferer will stand at full length (Fig. 41) pressing with outstretched arms down upon a sapling, that portion of it below the level at which his hands are holding on, being stripped of bark. A friend will then keep hitting the sapling some violent blows with a heavy piece of *Pandanus* tree.] The Tully River natives also relieve the congestion of head-ache through the nose by poking a sharp piece of bladey grass up one or other nostril until the blood flows. Pains (rheumatic) in the arms may also be treated among these same blacks by bleeding: for instance, I have seen an upper arm with numerous longitudinal incisions made between two ligatures, the limb strongly flexed, and the blood pouring down from off the tip of the elbow.

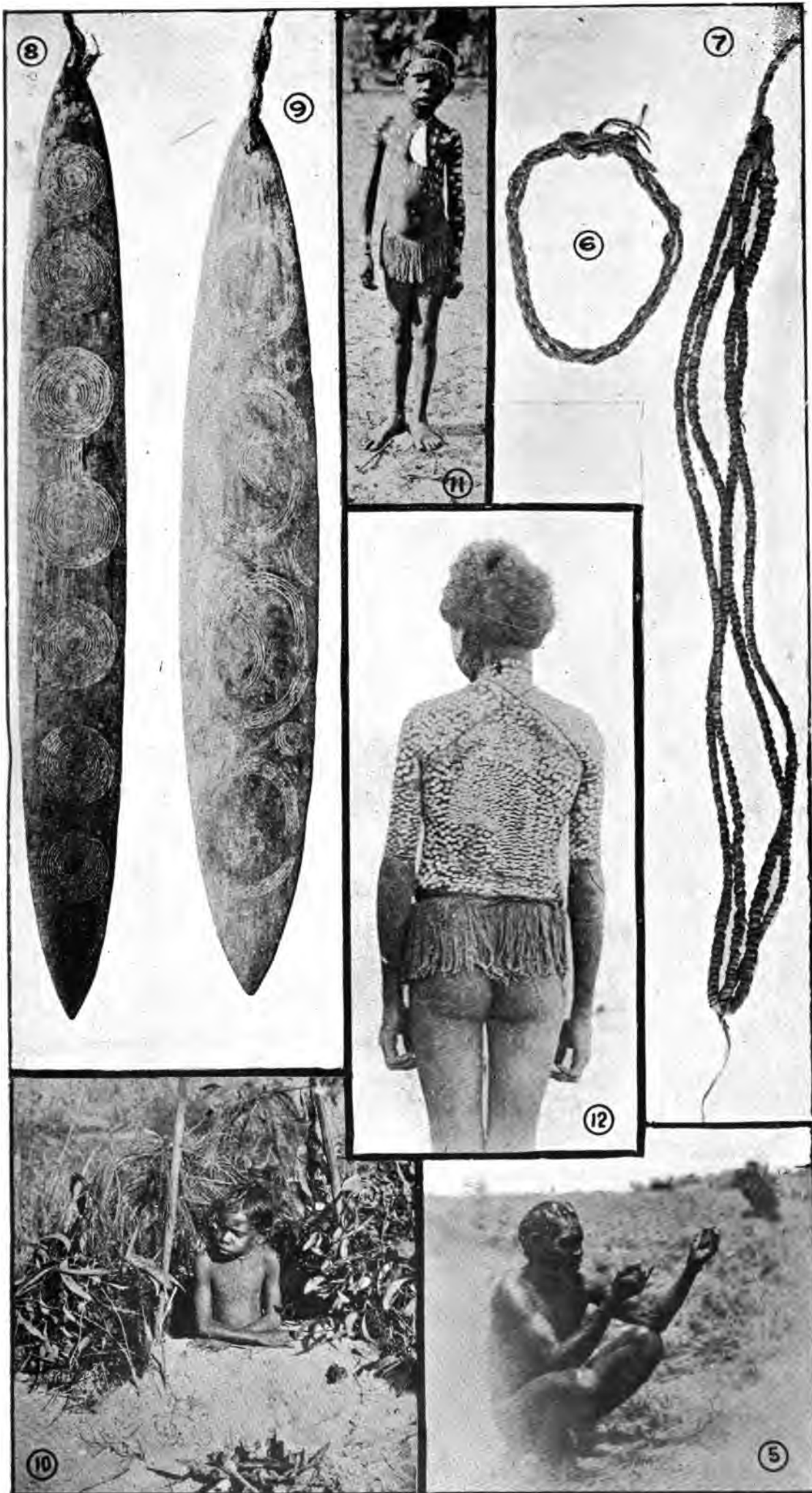
163. L. Dressings, etc.—(—for cuts).—Iguana, snake-, or any other kind of fat or grease, mixed more or less with mud and dirt, is used everywhere in the North-Western districts, as a dressing for cuts and wounds of all descriptions, these never being allowed to heal by "first intention." In other areas it is usually mud or clay alone which is jobbed into the incised surface to stop the hæmorrhage: on the Palmer charcoal may be used. [Among the Brisbane blacks, serious spear-, boomerang-, or waddy- wounds were sucked by the medicine-man who would spit the blood out into the patient's face, and who, if he considered no fatal results likely to follow, would often pretend to extract the crystal (*kundri*) that the medicine-man (*turrwan*) doomed the victim with. These same natives treated any ordinary wound by simply washing with water, and scraping with a stick until the blood stopped flowing: it would then just be covered up with wood-ashes or blood-wood charcoal,—if neither were available, with ordinary earth. (*T. Petrie*).] On the Tully River, in the case of a spear-wound, the weapon is never removed immediately after transfixion, but left *in situ* for an hour or two when it is said to come out far more readily. In other places, solutions of vegetable origin, *e.g.*, *Erythrophlæum*, *Pterocaulon*, etc. (sect. 159), may be brought into requisition for similar injuries.

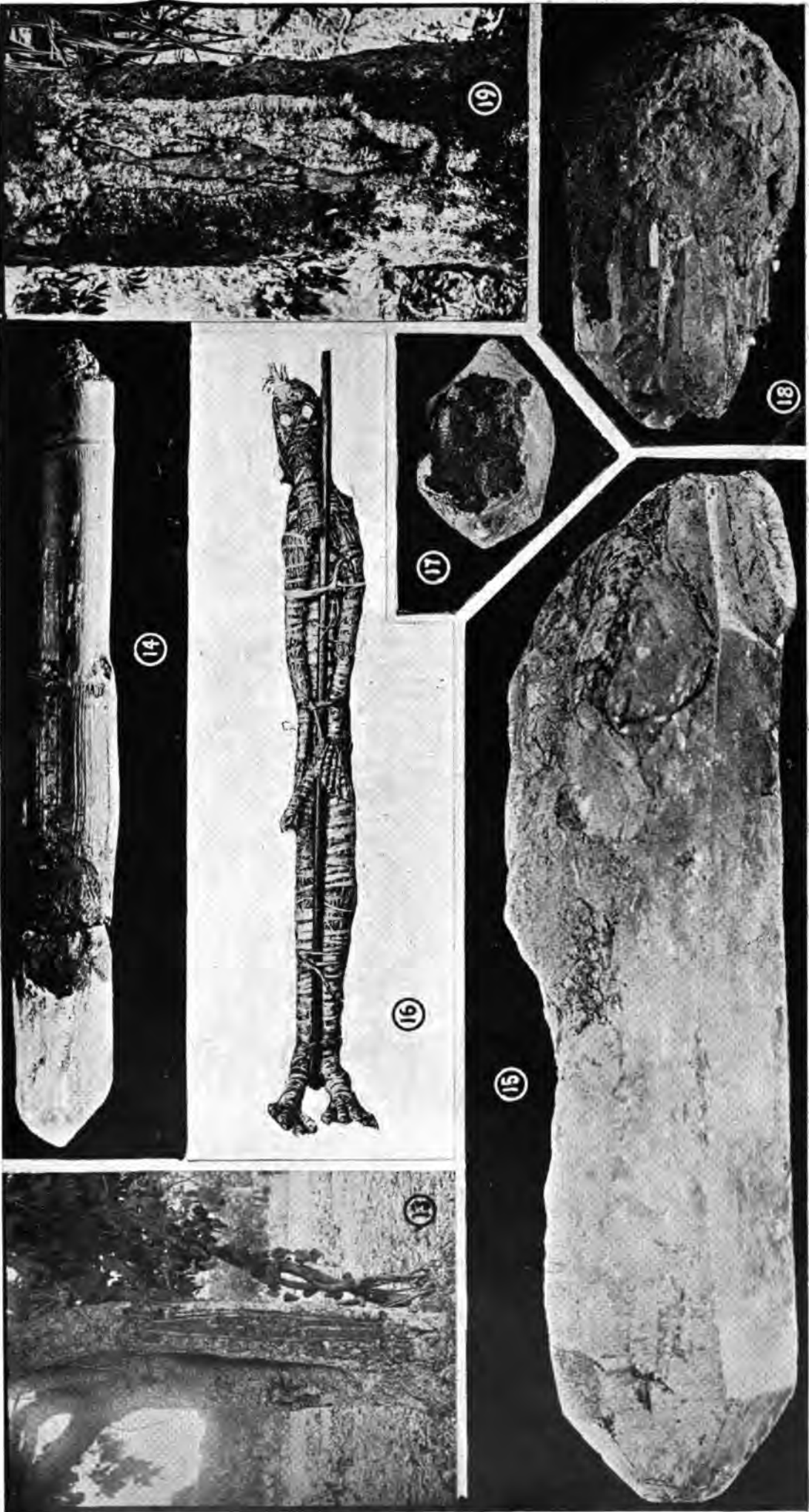
In the neighbourhood of Macdonnell Electric Telegraph Office, when the youngsters' noses are bored, the milk from the breast of some woman is squeezed on to the wound, the alleged effect being to take the pain away. (*W. R. Webster*.)

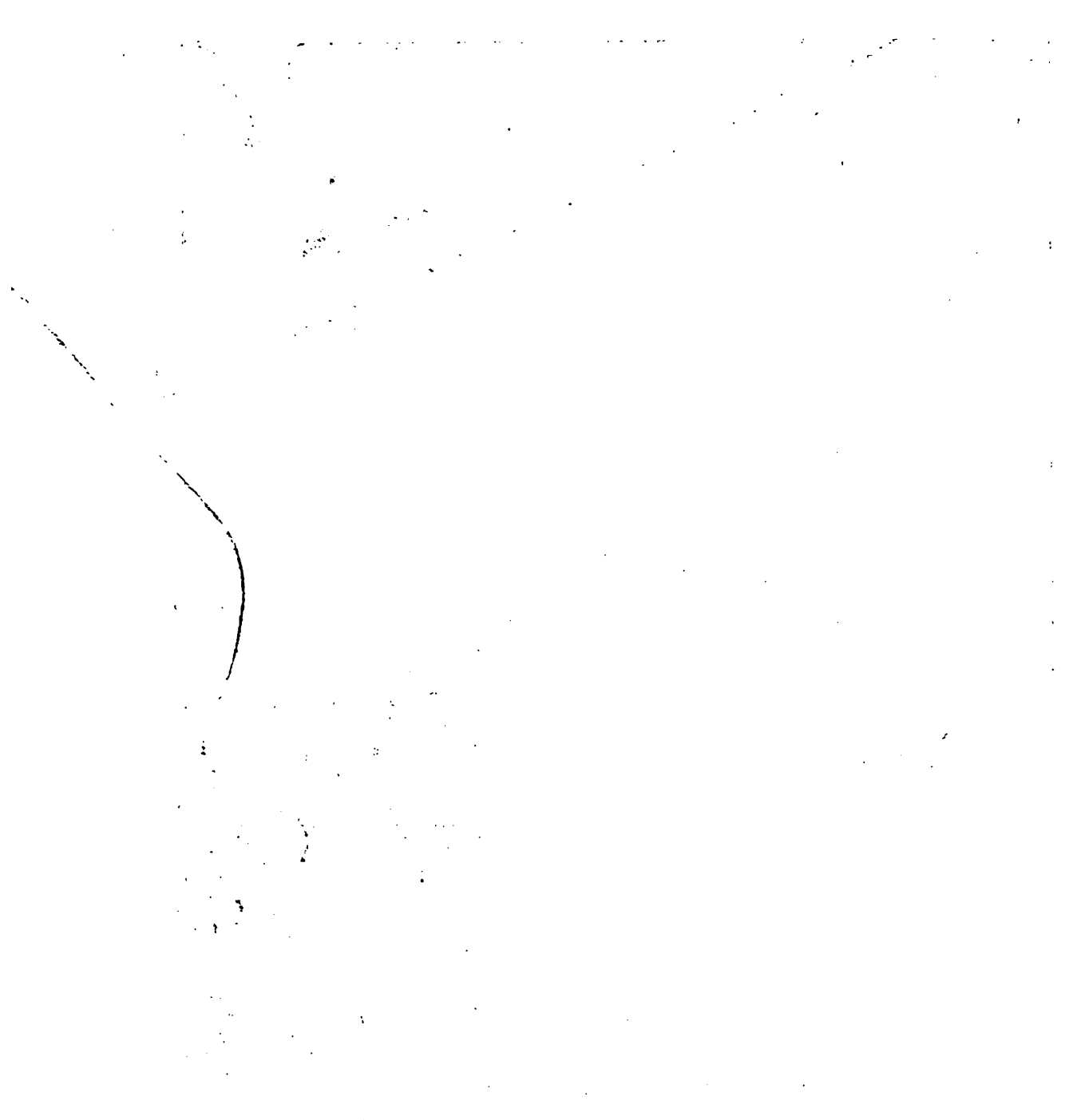
(—for fractures).—In the case of fractured limbs, two to four sticks in the rough tied on a broken arm or leg, and left there perhaps for from one to two months, constitute the treatment as pursued in the North-Western districts. The value of the remedy is rendered inactive, however, by the fact that these splints are not of sufficient length to keep the adjacent joints at rest. On the Tully, numerous superficial longitudinal incisions are made over the situation of the fracture, short pieces of wood or bone are tied along and over the wounds, and the whole bandaged up with lawyer-vine (*Calamus*).

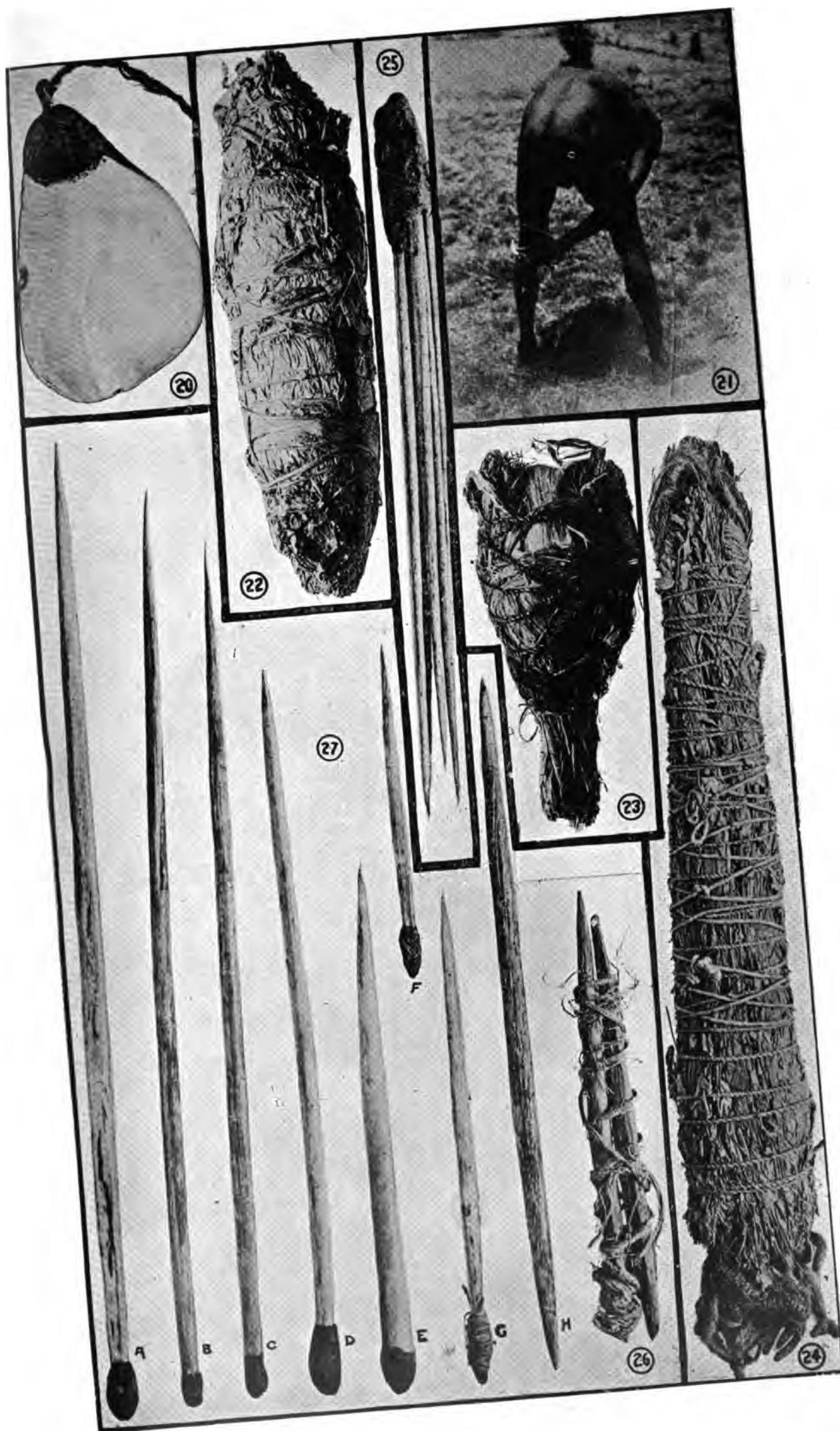
164. Treatment of snake-bite.—At Cape Bedford, snake-bite is cured by rubbing the fœces of the reptile into the wound made by its teeth. In the case of accidents with black snakes on the Palmer River, the limb is held tightly with the hand, just above the injury, and the patient made to eat some raw bark of the Leichhardt-tree (*Sarcocephalus cordatus*) which soon makes him vomit, and so gives him relief. With these same natives, when bitten by other poisonous snakes, the wound is sucked by a medicine-man who is thus supposed to draw out the serpent's teeth. In the Boulia and Cloncurry districts, with his hair-belt, or any convenient twine, the victim ties two ligatures around the limb bitten, above and below the knee if on the leg, or above and below the elbow if on the hand, but whether these ligatures are intended for relieving the pain (sect. 155) or arresting the hæmorrhage, it is impossible to say with certainty; if convenient, he applies suction to the wound, and is given a sort of vapour-bath. This treatment is carried out as follows:—Having dug a largish hole, a fire is kindled in it and some big stones and lumps of rock heated thereby. When these have become sufficiently hot and the flames somewhat subsident, a number of fresh leafy boughs and branches and leaves, sprinkled with water to prevent ignition, are placed on top. Upon this smoking mass of foliage the bitten individual now lies, and what with the smouldering embers and hot steam arising from the leaves he soon becomes enveloped in perspiration, falls asleep for two or three hours, wakes up refreshed, has a "spit," and is quite recovered. Among the Boulia blacks, there are indications of a desire on the part of the medicine-men to claim a share in the cure, with a corresponding reward, especially in those cases where the snake has got away from the bitten person down some crevice or hole. For instance, supposing the patient's wife or other messenger had come post-haste into camp to consult the doctor (sect. 147c) he would, after satisfying himself by careful cross-examination that no fatal effects were likely to be expected, look up at the sky and declare he could see Malkari spitting and that therefore the patient would be all right if he submitted to the prescribed treatment of a vapour-bath. More than this, the doctor himself goes to the place where the accident happened, is shown where the snake lies hid, digs it out, and lets it glide away a few feet before commencing to pelt it with stones. During this process the snake gradually diminishes in size, and gradually becomes harmless, when it is carried back to camp where the medicine-man, turning its skin half-way inside out while still alive, throws it into the water, and so makes an end of it. It is needless to say that no layman is allowed to witness any part of this procedure.

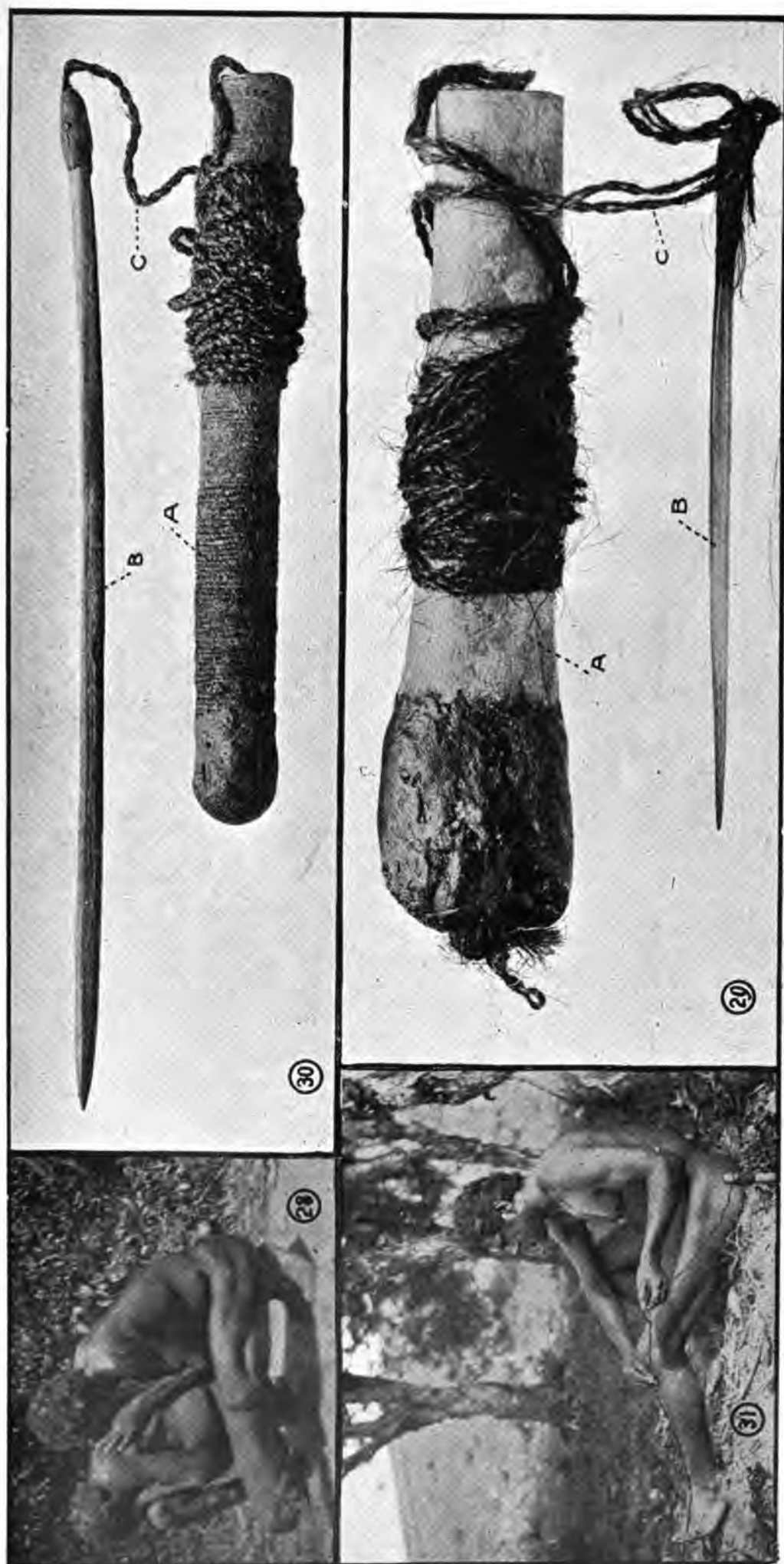


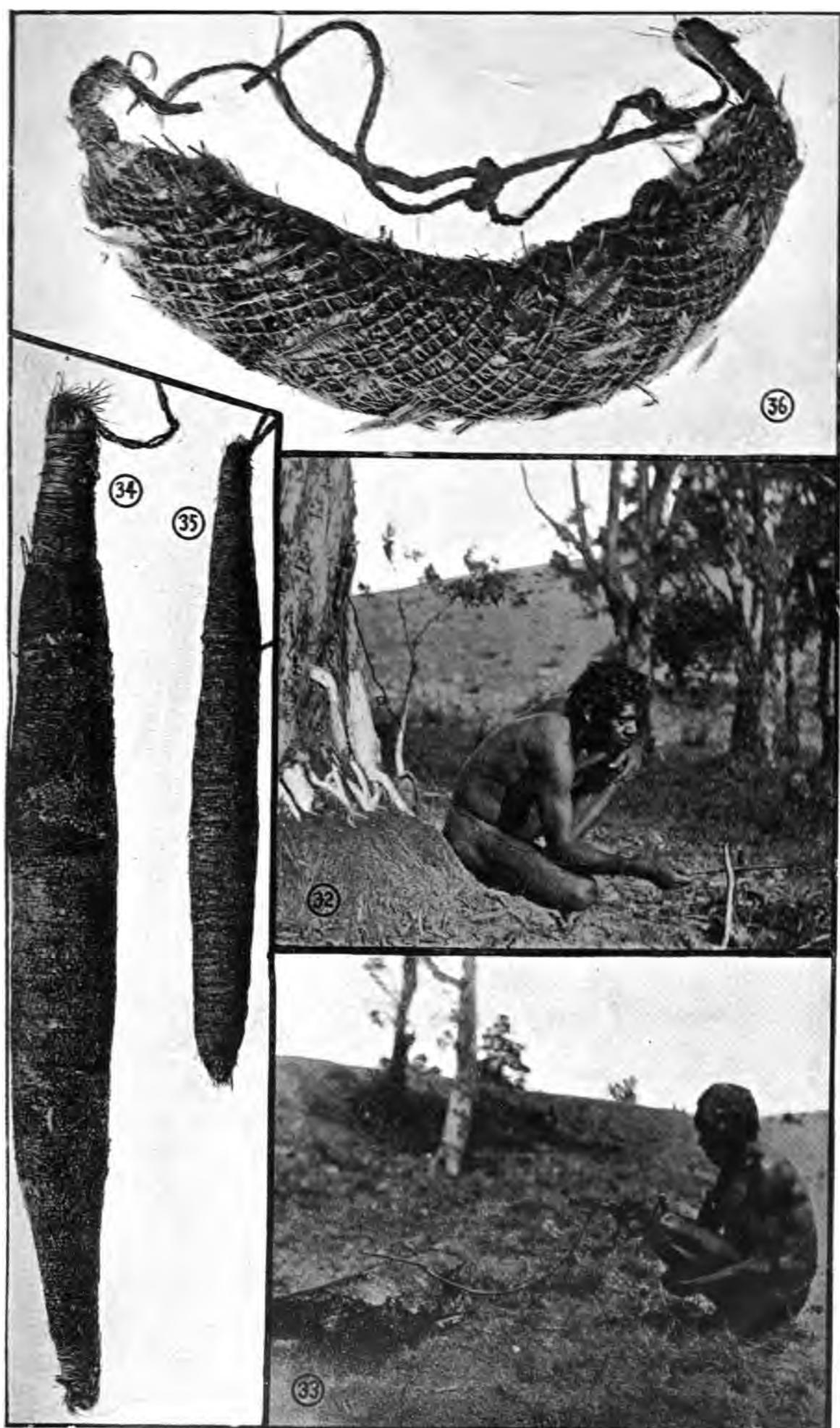




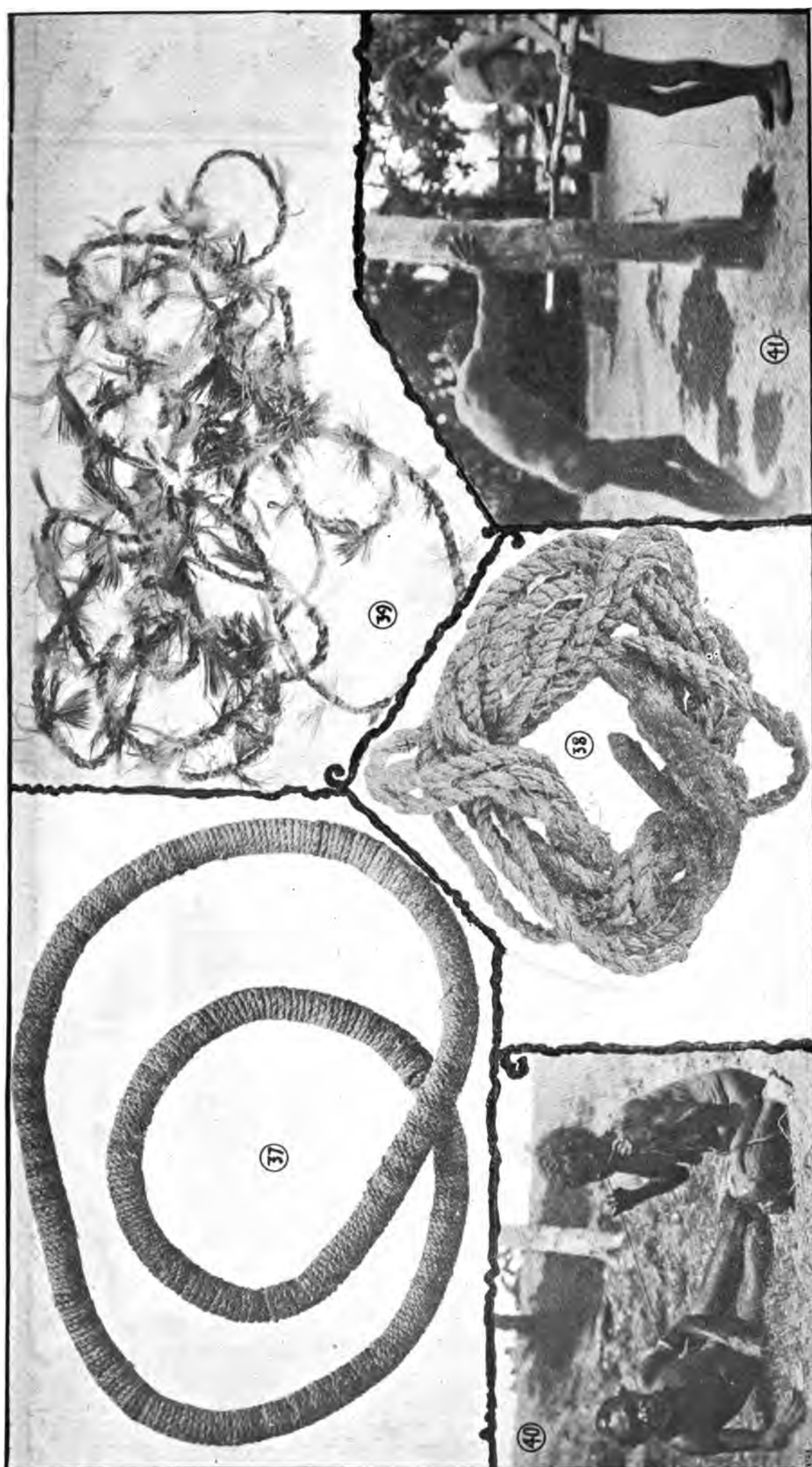








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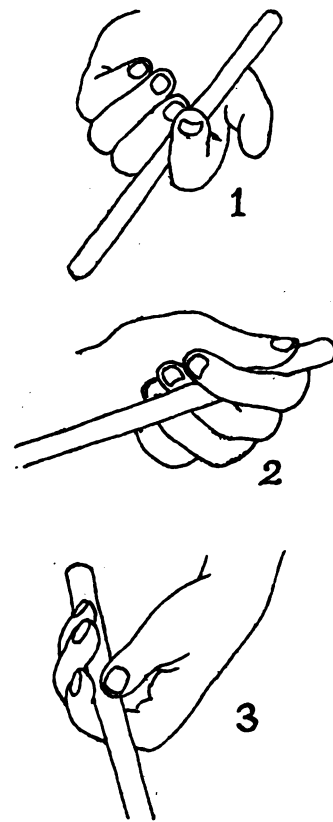
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PL. XXXVII.



W. E. Roth.

PL. XXXIX.



W. E. Roth.

PL. XXXVIII.



W. E. Roth.

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1903.
—
QUEENSLAND.

DEPARTMENT OF PUBLIC LANDS, BRISBANE.

NORTH QUEENSLAND ETHNOGRAPHY:
Bulletin No. 6.

APRIL, 1903.

AN ELEMENTARY GRAMMAR OF THE
NGGERIKUDI LANGUAGE

Issued in accordance with Resolution of Parliament.

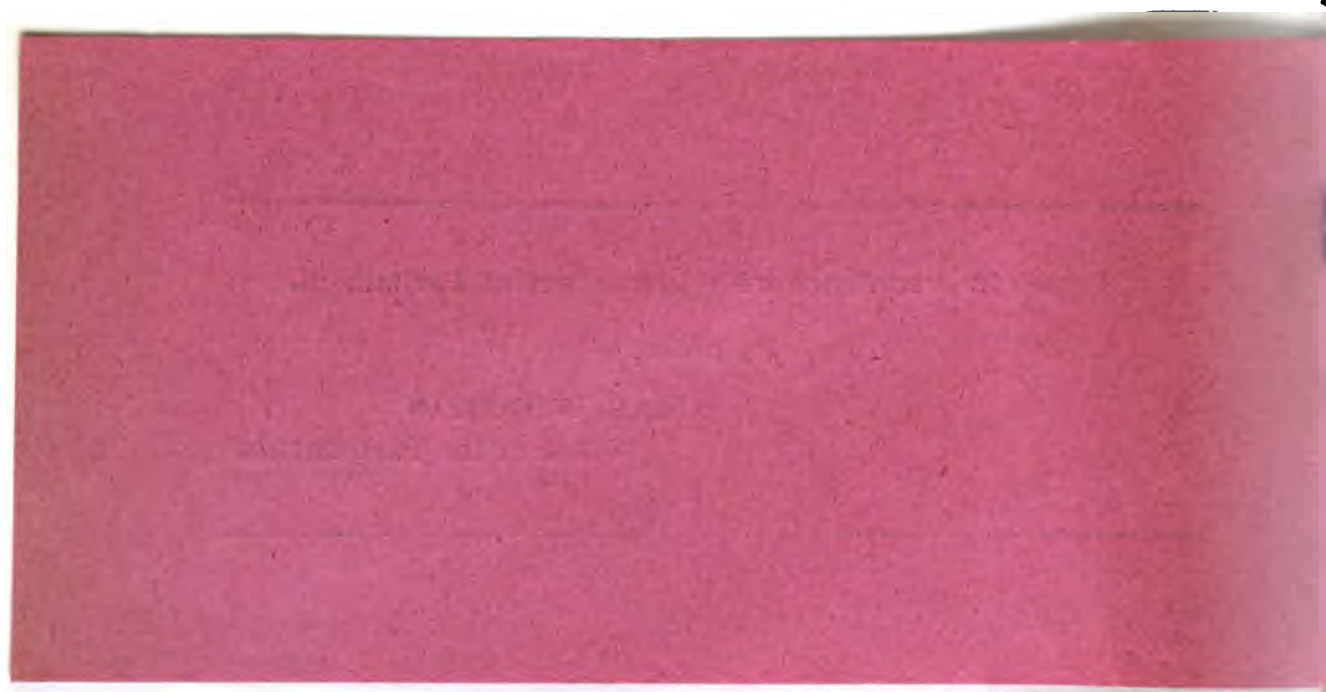
By order,

CHAS. W. COSTIN,
Clerk of the Parliaments.

BRISBANE:
BY AUTHORITY: GEORGE ARTHUR VAUGHAN, GOVERNMENT PRINTER, WILLIAM STREET.

1903.

C. A. 10—1903.



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—
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AN ELEMENTARY GRAMMAR OF THE
NGGERIKUDI LANGUAGE.

BY

THE REV. N. HEY,

Superintendent of the Presbyterian Mission, Mapoon, Bataria River, North Queensland.

REVISED AND EDITED BY

WALTER E. ROTH, B.A., M.R.C.S., ETC.,

The Northern Protector of Aborigines, Queensland.

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND.

BRISBANE:

BY AUTHORITY: GEORGE ARTHUR VAUGHAN, GOVERNMENT PRINTER, WILLIAM STREET.

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PREFACE.

ALTHOUGH I have studied Nggerikudi for the last ten years, I must confess that there are still many points in the language which are quite inexplicable to me, and that my knowledge is by no means complete. I am only justified in publishing the following Grammar on the grounds that the aboriginals are fast disappearing, and that the major portion of the continent is still a *terra incognita* to the philologist.

The system of spelling adopted is based on that laid down in the circular issued by the Royal Geographical Society of London on "The Orthography of Geographical Names."

It should be stated that I have drawn up the following pages, section by section, on the lines followed by Dr. Roth, the Northern Protector of Aborigines, in his Bulletin No. 2 (North Queensland Ethnography), "The Structure of the Koko-Yimdir Language."

N. HEY.

Mapoon, March, 1903.

AN ELEMENTARY GRAMMAR OF THE NGGERIKUDI LANGUAGE.

1. The Nggerikudi language is spoken by the aboriginals along the coastline extending from Cullen Point (Batavia River) to the northern side of Duyfhen Point, a distance of about 50 miles.

The aboriginals throughout this area were formerly divided into three different tribes speaking distinct dialects, but with the advent of civilisation their number has been greatly diminished. The natives who originally spoke the Nggerikudi dialect being the most powerful, even now numbering 400, took possession of the whole district and retain their own language, but not in its full purity.

2. The Naming of Things in General.

(a) Generic Terms.

adauro	=	any and every person, people.
lako	=	" " thing, animate and inanimate.
agama	=	" " child.
ambugo	=	" " animal.
aga-dada	=	" " snake.
daibe-dima	=	" " bird.
ariguna	=	" " animal's young.
ko	=	" " tree, stick, bush.
tchear	=	" " spear.
agaia	=	" " wommera.
yi	=	" " food.
drago	=	" " prepared food.
ugia	=	" " kind of meat.
nia	=	" " fish.
la-ina	=	" " grass.
agora	}	" " stone.
manata		
troka	=	" " fruit.
mbai	=	" " dilly-bag.

(b) Names indicative of appearances, etc.

fraladanu (human artery)	=	creper, rope.
tena (human leg)	=	root of tree.
troka (head)	=	any fruit
nganu (sun's rays)	=	spider's web.
woa (ear)	=	horn of cattle.
mbai (dilly-bag)	=	greedy person. [Cf. a man's "corporation," "paunch," etc.]

(c) Names descriptive of material of construction.

leana	=	Hæmodorum coccineum, R. Br. = dilly-bag made from it.
adambar	=	Canarium australasicum, R. v. M. = gum-cement made from it.
beruma	=	Cockatoo top-knot = head ornament made from it.
agantra	=	Pandanus, sp. = armband made from it.
naumuta	=	Erythrophlæum Labouchei = spears made from it.
fundari	=	Melo diadema = shell-boiler made from it.
arai-i	=	Eucalyptus tetradonta = bark canoe made from it.
andreata	=	Ceropegia cumingiana = apron-belt made from it.
fibra	=	sp. of cotton-tree = canoe made from it.
adi	=	sp. of tea-tree = water-vessel made from it.

(d) *Names of introduced articles, etc.*

dera-ina	= fish spines = needle, pin, nail.
jensinga	= native mat = blanket.
adori	= honey = sugar, sweet.
ni	= smoke = tobacco.
oni	= shell (used for cutting) = knife, scissors.
agora	= stone, stone tomahawk = iron tomahawk.
sae	= sun = a lamp.
badra	= canoe = boat.
adae-miu	= to shut the eyes = prayers.
pre-entchume	= ant-hill = clay house

3. Nouns: Names of parts of the human body.

troka	= head.
t.-tranko (good, well, healthy)	= sensible, clever.
t.-enaideka (bad)	= head-ache.
li	= temple.
nga	= hair.
n.-tcherma (white)	= grey-haired, old.
avoa	= brain.
woa	= ear.
w.-detra	= deaf, stupid.
w.-tcheana(not)-mai(listen)	= disobedient.
w.-na-abanu (breath, wind)	= dead tired, faint.
bai	= forehead [a hill].
b.-ada	= eyebrows.
adae	= eye.
a.-mu	= to close the eyes, prayer.
a.-patchi	= to open the eyes, wake up.
a.-trelikwine (red)	= wild, mad.
a.-lena (sharp, smart)	= keen-sighted.
kogana	= nose [the beak or bill of bird, snout of fish, sting of mosquito or any other insect].
k.-mutchikana	= nostril.
enga	= lip [edge of the mouth of dilly-bag, edge of a shell].
e.-enga	= two lips, i.e., mouth [entrance of hut or house].
e.-paufu	= obscene, bad talk.
e.-rogaru	= throat, whence the voice proceeds.
engau	= chin.
na-abanu	= breath [wind].
peduna	= tongue.
p.-dekata	= soft to the touch, false.
p.-pama (quiet)	= a person of few words [mist].
abau	= tooth, small bones.
a.-tchu	= sharp-edged.
a.-gana	= sharp-pointed.
nga	= beard [the antennae of a cray fish]. Note:—There is no separate word for moustache.
kono	= back of the neck.
daru	= shoulder.
d.-agama(child)-na(with)	= child sitting on shoulder, "pickaback."
d.-aga	= arm [bough or branch of tree].
mai-e	= armpit.
oni	= chest.
tchuo	= breast.
t.-troka](head)	= nipple.
t.-tana	= breast-milk.
koi-itchi	= liver.
mra	= semen.
m.-banu (throw)	= seminal emissions, lightning.
baroama	= fat.
b.-ngoe (water)	= fat, oil.
ra	= belly.
r.-reguna	= bastard, in the sense of one who has no recognised father [used as a "swear-word"].
r.-adima (angry, wild)	= hungry.
r.-beri	= big, swollen, filled up.
r.-agama (child)	= pain, labour pains.
aboni	= back-bone [keel of boat, leaf scale, shell of turtles, etc.]
a.-watrika (strong, hard)	= self-willed.
muoto	= elbow.

a	= hand, fingers.
a.-guredana	= fist, closed hand.
a.-tchuru	= palm of hand, flat.
a.-voni	= back of hand, back [<i>cf.</i> voni with aboni = back-bone].
a.-ni	= take hand, shake hands.
a.-trank) (good, etc.)	= skilful with hand, clever.
ladu	= fork of legs or fingers [fork of tree, claws of crab, etc.]
tena	= leg [root of tree].
goa	= foot, toes.
g.-amana	= tracks, footprints.
g.-zuru	= sole of foot.
leuma	= rib.
kaie	= skin [bark of tree].
mboa, am-yoa	= flesh.

4. Nouns: Names of the Human Body as a Whole.

avori	= dead body of man or animal, corpse.
navoina	= corpse (human only), death.
mboa	= body, solid flesh.
agama	= child, young [smile, laugh].
a.-na (with)	= pregnant.
a.-banu (to throw)	= to be confined (<i>lit.</i> child thrown out).
a.-dae (to lift, but only used in the sense of a young plant lifting the ground before its appearance)	= labour pains.
draba	= young boy, little.
edoutru	= older boy.
ma	= man, male.
wadraba	= old man.
noatra	= old, old man who makes rain and kills by witchcraft, doctor.
adoa	= aged.
pomagana	= young girl.
lante	= big girl.
moa-danu	= young married woman (<i>see</i> Moa, sect. 11).
endabada	= old woman.
entranama	= woman.
giawate	= white man, light (in colour).
nipro-paki	= mad-man [nipro = sp. of plant used for stupefying fish].
tcherita	= single man, bachelor.

5. Nouns: Names of Objective and Subjective Sensations.

ngoe (water)-eteta (soft)	= coward.
ngoe (water)-ye (with)-aentchina (covered up)	= one who hides in the water, a coward.
adira	= anger, wild, angry (mild form).
aga-moa (fire)	= wild, fire shooting up, red wood.
namatu	= wild, savage, to be in a wild condition [crocodile].
adagonini	= jealousy.
rungena-lange	= sadness, sad.
tchue	= voice, speech [to tell].
t.-tcheana (not)	= speak not, silence.
t.-kue (keep, possess)	= thought, to think.
t.-seana (brought)	= news.
pama	= silence, not to make a noise either by speech or motion.
foi	= cry, weeping.
ago	= call, cry of any animal.
agoa	= sleep, faint.
agama	= laugh, smile [children].
magata	= friend, relative.
m.-tcheana (not, no more)	= enemy.
tranko	= health, healthy, good.
onnone	= sickness, anything out of place, abnormal.
ngona	= a cough, coughing.
darata (cold) -ngona (cough)	= a cold that has brought on a cough.
gea	} = rest, spell, sit-down.
ana	
proruma	= corroboree, play, joy, dance.
p.-parlema (true, straight)	= a term often affixed to nouns and adjectives to emphasise the meaning of the sentence, like our words "very," "extremely," etc. = true joy, very glad, etc.
entrea	= song, sing.
agana	= initiation ceremony [<i>cf.</i> ago = call, cry of an animal].
namaleta	= the name of an insect which is supposed to carry secrets from one camp to another (<i>cf.</i> our English, "A little bird told me"), and so, a messenger.

6. Nouns: Names of Family Relationships.

These are much more complicated than in our own language, even the male and female parents calling their offspring by different names.

<i>name.</i>	<i>used by.</i>	<i>to express (his or her).</i>
mane-inga ...	man, woman ...	older brother
otro ...	" " ...	younger brother
" ...	" " ...	younger sister
go-ete ...	" " ...	older sister
" ...	" " ...	mother's older sister
mi-ata ...	" " ...	mother's older brother
" ...	" " ...	mother's younger brother
" ...	" " ...	father's younger sister
ni-ata ...	" " ...	father's elder sister
we-ata ...	" " ...	father's elder brother
ni-ata ...	elder brother ...	brother's son
" ...	" sister ...	brother's daughter
yu-guntu ...	" brother ...	sister's son
yu-gu-unta ...	" sister ...	sister's daughter
" ...	younger sister ...	sister's daughter
nu-merunto ...	woman ...	father-in-law
yu-yumbra ...	younger brother ...	sister's son
" ...	" " ...	sister's daughter
nai-beguta ...	man, woman ...	mother
da-tu ...	" " ...	mother's younger sister
danu (my, mine) -ma (very own)	husband ...	wife
ma-ngu ...	" ...	sister-in-law
" ...	" ...	brother-in-law
yu-bekwina ...	woman ...	son
yu-tru ...	younger sister ...	sister's son
ni-anta ...	wife ...	husband's older brother
danu (my, mine) -prange (caught)	" ...	husband, i.e., my man who caught me
ontu ...	" ...	husband's younger brother
lante-ngenuma ...	man ...	sister's husband
nai-der ...	man, woman ...	father
we-ata ...	" " ...	father's younger brother
no-abanta ...	woman ...	mother-in-law
la-eta ...	man, woman ...	father's father
mi-te ...	" " ...	mother's mother
dai-da ...	" " ...	mother's father
bai-da ...	" " ...	father's mother
yu-unta ...	man ...	son's son
" ...	" ...	son's daughter
yu-manta ...	woman ...	daughter's son
" ...	" ...	daughter's daughter
yu-danta ...	man ...	daughter's son
" ...	" ...	daughter's daughter
yu-banta ...	woman ...	son's sons
" ...	" ...	son's daughters
yu-ta ...	man ...	son
godeba ...	" ...	daughter
yu-ma-unta ...	younger brother ...	brother's son
yu-te ...	" " ...	brother's daughter
ma-regana ...	woman ...	daughter-in-law
fa ...	man ...	mother-in-law
ya-ma-achi ...	woman ...	son-in-law
ya-ma-anta ...	man ...	son-in-law
lante (girl) ...	woman ...	daughter

It is a curious custom among the aborigines speaking the Nggerikudi dialect that if a person loses father or mother or finds his or her way into a strange district, this person will be adopted by a married couple as son or daughter even if he or she is married. A person not having any known or recognised parent is called "ra-reguna" a term of great disgrace.

7. Nouns: Names of Persons.

Each aboriginal is named either after a part of the human body, an animal, a plant, or a mineral, and therefore a special list of names is not required.

There is no distinction in the names of male or female. Besides the name by which a native is called he has also a class name, derived from the place which he is supposed to have inhabited before he was born [see Roth: Bulletin No. 5, sect. 68]: the tribe has three or four such "sacred" places.

It should be mentioned that if the mother is a lizard (a-wari) all her children are called lizards; if mother is a certain sp. of yam (enda-bari) all her children are yams.

8. Nouns: Namos of Animals.

ngi-a	= meat or flesh (of animals).
ariguna	= the young (of animals).

(a) *Mammals*: are spoken of as possessing "hands" and "legs."

dena-agoa	= to suckle (but only used with animals).
am-woko	} = species of kangaroo (<i>Macropus</i>).
ka-ruba	
ada-juba	
lai	= mouse, rat.
adina	= rat.
ago	= native cat (<i>Dasyurus</i> sp.).
pru-eta	= opossum (<i>Trichosurus</i> sp.).
wo-ru	= wallaby (<i>Halmaturus</i> sp.).
ba-du-guna	= dugong (<i>Halicore dugong</i>).
o-ka	= dingo, dog (<i>Canis dingo</i>).
gadara	= porcupine (<i>Echidna aculeata</i>).
adanyekuta	= flying-fox (<i>Pteropus funereus</i>).
wurri	= bandicoot (<i>Bettongia</i>).

(b) *Birds*.—Birds are spoken of as having "legs" and "feet," the beak or bill is called a nose (ko-gana), and a nest is known as a dilly-bag (mbai).

daibe	= wing.
d.-dima	= any and every bird.
fo	= tail (only of birds).
jina	= egg.
la-eprina	= white cockatoo (<i>Cacatua galerita</i>).
prolingata	= black cockatoo.
bo-raga	= Torres-Strait pigeon (<i>Myristicivora sphenorrhoa</i>).
chona	= pigeon (<i>Myristicivora</i> sp.).
yambanra	= ducks.
ngarata	= weaver-bird (<i>Calornis metallica</i>).
pantra	= pheasant (<i>Centropus phasianus</i>).
yuraba	= corella (<i>Licmetis nasica</i>).
entrau-aki	= galah (<i>Cacatua roseicapilla</i>).
adaruta	= pelican (<i>Pelecanus conspicillatus</i>).
dro-la	= native companion (<i>Antigone Australasiana</i>).
mo-ruta	= plain turkey (<i>Eupodotis Australis</i>).
yam-bani	= scrub turkey (<i>Telegalla Lathamii</i>).
ju-ana	= scrub hen (<i>Megapodius tumulus</i>).
ra-e	= black duck (<i>Anas superciliosa</i>).
ge-reta	= crow (<i>Corvus coronoides</i>).
ju-ma	= laughing-jackass (<i>Dacelo</i> sp.).
age-jingena	= emu (<i>Dromæus Novæ Hollandæ</i>).
dora	= eagle-hawk (<i>Aquila</i> sp.).
la-du	= hawk.
narakuta	= dove (<i>Geopelia humeralis</i>).
ingopra	= parrakeet (<i>Psephotus pulcherrimus</i>).

(c) *Reptiles*.—The eggs of turtles, crocodiles, and lizards are called by the same name as birds' eggs. The snout of a crocodile is called the nose (kogana); the shell of the turtle is known as the back-bone (aboni).

aga-dada	= any and every snake.
denata	= carpet snake (<i>Morelia variegata</i>).
ni	= sp. of small snake. [Sand-fly].
maratru	= iguana (<i>Varanus</i> sp.).
a-wari	= lizard.
namatu	= crocodile [ironbark tree (cf. its rough bark)], wild.
broatcha	= frog. [Cf. broatchina = to jump over].
trana	= green turtle.
yabera	= turtle (the tortoise-shell variety).

(d) *Fish*.—The fins of fish are spoken of as shoulders (daru), and the snout as the nose (kogana).

ni-a	= any and every fish.
wi-na	= fish-scales. [Shell].
dera-ina	= dorsal spines. [Wire for making spears].
dra	= tail (of fish only).
pra-gana	= tail (of stingaree only).
gambanji	} = sp. of mullet.
ada-ata	
no-uta	
ngoata	= "cat-fish."
adae-ganbata	= "guard-fish." [adae = eye].
adae-ganbadu	= a fish with spots resembling eyes.
adae-wara	= " " " "

da-wa	= "stone"-fish.
ede-uta	= a fish with many spikes (ede = covered).
emu-gata	= a fish resembling a bird with the same name.
ye-rata	= "sword-fish."
ladu (fork)	= a fish with tail resembling a fork.
mbai (dilly-bag)	= a fish of the same shape as a dilly-bag.
ya-kara	= sp. of fish. [Centipede].
tene-bi	= "flying-fish." [Grasshopper].

(e) *Mollusca*.—The shell of a mollusc is spoken of as the backbone (aḥopi). All the following are put to economic uses:—

ngarmbunya	= <i>Anomia elyros</i> .
ko-elana	= <i>Arca navicularis</i> .
arú-itidi	= <i>Arca pilula</i> .
té-uma	= <i>Arca scapha</i> .
andró-e	= <i>Atactodea mitis</i> .
mo-anga-i	= <i>Cardium vertebratum</i> .
mo-i	= <i>Cassidula angulifera</i> .
pera-te	= <i>Cassis coronulata</i> .
trainapu-gwe	= <i>Chama pulchella</i> .
de-vi de-vi	= <i>Conus trigonus</i> .
on-yi	= <i>Cyrena jukesii</i> .
andro-i	= <i>Cytherea meretrix</i> .
adu-ichimba-gwe	= <i>Donax faba</i> .
pundara	= <i>Fusus proboscidalis</i> .
ngar	= <i>Glyphus</i> sp.
cheranganama	= <i>Lutraria philippinarum</i> .
do-wawanna	= <i>Macra dissimilis</i> .
tre-a	= <i>Macra obesa</i> .
ton-dro	= <i>Malleus vulsellatus</i> .
wu-idi	= <i>Meleagrina margaritifera</i> .
pera	= <i>Melo diadema</i> .
dama-dama	= <i>Murex adustus</i> .
long anana	= <i>Modiola albicostata</i> .
wi-pi-che	= <i>Mytilus horrida</i> .
tru-no	= <i>Nassa unicolorata</i> .
ro-anggate	= <i>Natica bicolor</i> .
to-ri	= <i>Nerita lineata</i> .
kantaga	= <i>Ostrea glomerata</i> .
yung-ko	= <i>Strombus campbelli</i> .
ye-e	= <i>Tapes hiatinus</i> .
lai-kana	= <i>Tellina truncata</i> .
to-ri	= <i>Thersites barneyi</i> .
an-gar-gana	= <i>Trochus bicarinatus</i> .
in-ju-tru	= <i>Turbo foliaceus</i> .
mbrurri	= <i>Turritella cerea</i> .
ba-ang-kana	= <i>Venus Lamarckii</i> .
on-yi-te	= <i>Venus puerpera</i> .
nyuro-nyunama	= <i>Pecten gloriosus</i> .
tai-peri	= <i>Pinna menkei</i> .
ngarmarate	= <i>Placuna placenta</i> .
truno	= <i>Purpura amyda</i> .
pandarate	= <i>Pyrula foliacea</i> .
nyuro-gwe	= <i>Spondylus violascens</i> .

(f) *Crustacea*.—The craws of crabs and lobsters are known as forks (ladu), the "shells" as a stone (agora), the "legs" as hands (a), and their "bodies" as flesh (mboa). The antennæ of a lobster or cray-fish are spoken of as beards (nga).

korgata	}	sp. of crabs.
a-wo-cho		
a-nora		
mo-ro		
dodundrongonuma	}	species of lobsters.
langetama		

(g) *Insects*.—Insects are spoken of as having hands (a), wings (dai-be), and a skin (kai-e), but no bodies: their sting (kogana = nose) is expressed as a biting (dae), and their eggs as birds' eggs (jina).

dore-de	= any insect.
ko-untro-da	= that which cuts into the wood, (ko = wood, untroa = cut), and so, a caterpillar.
a-wa-u	= moth.
ma-ra	= fly.
ngo-ru	= mosquito.
ado-ri	= bee, honey, sweet, sugar, etc.
ni	= sand fly, [small snake].
maidenodo	= spider, [a bird].

tenebi	= grasshopper, [flying fish].
yakara	= centipede.
fu-ri	= wasp.
tantra	} = sp. of coleoptera.
awoi	
zime-zi	
jea-mane	
kau	} = flea, louse.
mu	
tre	= ant.
awau	= green-ant.

9. Nouns: Names of Plants.

(a) General.—

ko	= tree or trees, stick, wood.
aboni	= mid-rib of a leaf [back-bone].
kai-p	= bark [skin].
ladu	= fork of tree [fork of leg, fingers, etc].
daru-aga	= bough, branch [arm].
tena	= root [leg].
dona	= any edible plant.
goni	= flower.
troka	= seed, fruit [head].

(b) *Special*.—The following plants are all of economic value to the natives speaking the Nggerikudi language:—

a-un-du	= <i>Aneilema siliculosum</i> .
rdai-ite	= <i>Avicennia officinalis</i> .
a-mi	= <i>Boerhaavia diffusa</i> .
mo-odo	= <i>Bruguiera rheedii</i> .
warra-anji	= <i>Canthium lucidum</i> .
ku-iperi	= <i>Careya australis</i> .
andreate	= <i>Ceropegia cumingiana</i> .
ta-anji	= <i>Clerodendron inerme</i> .
dai-peri	= <i>Dioscorea sativa</i> .
parpangata	= <i>Entada scandens</i> .
aran-yi	= <i>Erythrina vespertilio</i> .
raru	= <i>Eucalyptus terminalis</i> .
esyú-ro	= <i>Eugenia carissoides</i> .
e-sie	= <i>Eugenia suborbicularis</i> .
be-ni	= <i>Ficus cunninghamii</i> .
dortalama	= <i>Ficus nitida</i> .
mo-i	= <i>Ficus orbicularis (var.)</i> .
las-kwani-kwi	= <i>Fluggea obovata</i> .
ru	= <i>Hardenbergia retusa</i> .
pera	} = <i>Melaleuca</i> sp.
rdi-i	
panjé-a	= <i>Heleocharis sphacelata</i> .
yi-awara	= <i>Hibiscus brachysiphonius</i> .
endabagi	= <i>Ippomoea grandiflora</i> .
kwaranam	= <i>Ixora timorensis</i> .
murite	= <i>Limnanthemum geminatum</i> .
dré-amberi	= <i>Livistona humilis</i> .
morra	= <i>Lucuma sericea</i> .
arau-u	= <i>Nymphaea coerulea</i> .
akau-dra	= <i>Pandanus aquaticus</i> .
manguru	= <i>Polyalthia nitidissima</i> .
me-nama	= <i>Portulaca australis</i> .
pró-atha	= <i>Scirpus littoralis</i> .
mbé-a	= <i>Sterculia quadrifida</i> .
ni-u	= <i>Tacca pinnatifida</i> .
anyu-o	= <i>Terminalia catappa</i> .
draiputo	= <i>Terminalia microcarpa</i> .
longarate	= <i>Tribulus solandri</i> .
wuri-wuri	= <i>Typhonium angustilobium</i> .
ba-ri	= <i>Entada scandens</i> .
le-ana	= <i>Hæmodorum coccineum</i> .
kornbrana	= <i>Hibiscus tiliaceus</i> .
altcherinka	= <i>Malaisia tortuosa</i> .
lo-thi	= <i>Panicum semialatum</i> .
te-uma	= <i>Tephrosia rosea</i> .
to-e	= <i>Vigna vexillata</i> .
mbau-nu	= <i>Vitis acetosa</i> .
nai-arana	= <i>Unona wardiana</i> .
nero	= a "fish-poison" plant.
adaruta-ngema	= a tall variety of grass.

10. Nouns: Names of Inanimate Nature.

manata	}	= any stone in general.
ago-ra		
pre		= ground, clay.
p.-entchume		= ant-hill.
roa		= white clay. [=Moon, whose face is supposed to be rendered visible by his face being painted with this clay].
rimpre		= red clay.
bana		= yellow clay.
ago-i		= sand, beach.
bai		= hill. [Fore-head].
ada		= hole.
daba	}	= road, track.
ra-ko		
ra-ina		= creek.
dra		= river.
d.-padra (big)		= anything very extensive, river, sea, or land.
d.-intchina		= rain-bow, a striped snake, the stripes of paint on the body.
ngoe		= water.
n.-ta (in)		= that which is left some time in the water, i.e., a small-sized fish-net.
rolle		= sea.
adina		= swamp.
nua		= rain, wet. [To make wet, i.e., to wash].
mbai		= island. [Dilly bag. Bird's nest].
ngi		= camp.
n.-padra (big)		= mainland.
na-abanu		= wind in general.
wantchi		= " "
w.-padra (big)		= storm.
a-uru wantchi		= east wind
deru	"	= north "
de-ai	"	= west "
a-e	"	= south "
lana		= sky.
andamru		= shadow, shade.
iyangena		= night (general term).
dona-paina		= dark night [dona = dark in colour].
awe		= ashes.
a.-yu		= cloud.
trakata		= thunder (believed to be a "spirit" roaring.
mra-banu		= semen-emission—i.e., lightning.
ngogoda		= star.
sae		= sun [a lamp].
s.-manu (for, special purpose)		= daytime, light produced by the sun.
s.-banu (thrown)		= midday.
nganu		= sun's rays [spider's web].
tcherma		= day-light, light produced by fire, clear, white.
t.-nika (being followed, etc.)		= twilight.
t.-potro (purple)		= daybreak.

11. Nouns: Names of Manufactured Articles.

analama	= a man's whole moveable possessions.
barama	= a woman's "
adae	= parcel of food rolled up in bark.
dana	= parcel containing part of a human body.
anoa	= parcel containing a whole human body.
mbai	= dilly-bag [bird's nest, island].
fraladanu	= rope, string, fishing line, &c. [human artery].
getru	= yam stick.
adambar	= gum cement.
umba	= " "
moa	= fire, firewood.
m.-danu (my)	= a woman with her own fireplace, a young married woman.
m.-ta	= firesticks.
bunderi	= nose-pin.
dodo	= men's dilly-bag, fishing net [a man who stops a fight is called "dodo"].
ngoe-ta	= water-in—i.e., fishing net of small size (which is left in the water for some time).
andreata	= apron-belt, name of tree (Ceropegia) whence the fibre for its manufacture is obtained.
mente-ngoto	= sucking string for drawing blood in sickness.
ombo	= small spear used in witchcraft.
ralemana	= "bull-roarer," &c.
gano	= message-stick.
bana	= a tree on which a mark of direction is cut.

ane-inga	= piece of twine for playing cratch-cradle, &c.
leo	= dolls consisting of a stick and piece of bark, made by little children.
avan-ina	= toy-spear, made from grass or reed.
arima	= a hollow reed through which grass-seeds are blown.
danga-a	= rattles made from various shells.
ko-truka	= sounding-stick (musical instrument).
agantra	= armlet.
jensinga	= mat.
langetana	= pearl-shell necklace.
ago-ragana	= opossum-hair necklace.
enenda	= parrots'-feather necklace.
anga	= shark-bone necklace.
enji-ai	= shell necklace.
forma	= a smoothing-board used in manufacturing spears, &c.
gamega	= a charm shell.
dango	= twine necklace (the sign of engagement).
tchili	= belt.
doina	= a mop for getting wild honey with.
tcheat	= any and every spear.
po-ini	} = special varieties of spear, depending on shape, size, use, etc.
to-ono	
dero	
larnape	} = stingaree-barb, a fighting spear mounted with these.
lar	
naumuta	
trater	} = spears named after the timber from which they are manufactured.
franko	
agai-a	
a-rar	= spear-thrower (wommer), flat.
badra	= blade of the spear-thrower.
tradana	= canoe, boat.
a	= outrigger of canoe.
	= v-shaped pieces attached to outrigger. [Hand].

12. Nouns: Gender.

(a) Gender amongst human beings is expressed by separate words:—

tcherita	= single man.	pomagana	= single girl.
ma	= man.	endranana	= woman.
wadraba	= old man.	endabata	= old woman.
edeutru	= boy.	lante	= girl.

(b) Gender amongst animals (except birds) is expressed by the terms indicative of boy and woman:—

trana-edeutru	= male turtle.	trana-endranana	= female turtle.
oka-edeutru	= he-dog.	oka-endranana	= slut.

[Note: When the name of any animal is mentioned without specifying the sex, the masculine gender is understood.]

Gender amongst birds is expressed by dori (= ? male sexual organ) and endranana (= woman):—
gereta-dori = male crow. gereta-endranana = female crow.

(c) Sex in plants is very exceptionally recognised.

13. Nouns: Dual and Plural.

(a) The *dual* is expressed by the term—

(i.) “loba” = both, a pair:—

danuprange	danuma	loba	yae =
husband (and)	wife	both	go.

(ii.) “ampute” = two (the second numeral) when referring to things, not to persons:—

yube	tcheat	ampute	denata =
I	spears	two	have received.

(b) The plural is indicated by the suffix -ba:—

lante	ngi-yae	wuyana =
girl	camp-from	came.
lante-ba	badra-na	gea =
girls	canoe-in	sit.

There are a few nouns which have an irregular plural:—

ma	= man	mara	= men.
maneinga	= brother	mana-ina	= brothers.

Several nouns in the singular form have a plural meaning:—

adauro	= people.	nia	= fishes.
daibe-dima	= birds.	troka	= fruit.

14. Nouns: Case.

(a) The *nominative* is generally placed foremost in the sentence, the objective usually follows it, and the verb governing the object is placed last:—

ma ko-na ges =
man tree-upon sits.
oka yi agoa-na =
dog food eat-en.

Note:—ma lube ko-na ges =
man he tree-upon sits

indicates that the man referred to sits alone upon the tree, whereas all others are standing underneath or around; otherwise the pronoun is never inserted with the noun.

(b) *Vocative*.—See Sect. 31.

(c) *Possessive*.—This is formed by suffixing -ma, -na, -ba, or -gaie to the possessing noun:—

agama epdranana-ma =
child woman-very own, i.e.,
the woman's child. [See Sect. 19.]
tchear naider-nu-gaie =
spear father-my, i.e.,
my father's spear (being in his possession).
gana ma-na =
message-stick man-on, i.e.,
the man's message stick (being upon his person).
ngoe-ta lante-ba =
net girl's, i.e.,
the girls' net (the net belonging to several).

(d) *Objective*.—

(i.) Where the object is in the direct action of the verb, the noun objective takes no special suffix, but is placed before the verb:—

ma-ra denuma-ba naruna yatchi =
men wives their will strike.
edeutru goete ngonu aniwi =
boy sister his fights.

(ii.) Where the object is in the indirect action of the verb, various prepositional inflections (sect. 29) are brought into requisition:—

naibeguta-danu edeutru-nu yi sea-na =
mother-my boy-to food gave.

15. Pronouns: Personal.

(a) *Nominative*.—The personal pronouns nominative are used to express the different forms of the auxiliary verb "to be," which has no existence of its own. These pronouns are only inserted with the nouns they qualify, when a special distinction is wished to be made. [See Sect. 14 (a)]

It should also be observed that these pronouns have two forms in the first person of the dual and plural: one includes and the other excludes the person addressed.

Number.	Person.		
Sing.	1	I (am)	yube
	2	thou (art)	epdrauba
	3	he, she, it (is)	lube
Dual	1	we two [incl.] (are)	liba
	"	we " [excl.] "	naba
	2	you " "	foeba
Plur.	3	they " "	loba
Plur.	1	we [incl.] (are)	ambo
	"	we [excl.] "	nambo
	2	you " "	yuarba
	3	they " "	naru

(b) Possessive.

Number.	Person.		
Sing.	1	my	danu
	2	thy	aganu
	3	his, her, its	ngonu
Dual	1	our (two) [incl.]	libana
	"	our " [excl.]	nabana
	2	your "	phoebana
Plural	3	their "	lobana
	1	our (incl.)	ambona
	"	(excl.)	nambona
	2	your	yuarbana
	3	their	naruna

These possessives are always inserted with relatives, but often in an abbreviated and contracted form: e.g.—naider-nu = my father; otro-nu = my young brother.

(c) Objective: (i.) Direct Object.

Number.	Person.		
Sing.	1	me	niba
	2	thee	neaba
	3	Him; her, it	noaba
Dual	1	us (two) [incl.]	libana
	"	" " [excl.]	nabana
	2	you "	phoebana
Plur.	3	them "	lobana
	1	us [incl.]	ambona
	"	" [excl.]	nambona
	2	you	yuarbana
	3	them	naruna

NOTE: That the dual and plural are identical in the possessive and objective pronouns: this was found to be equally true in the dialect spoken on the Embley River.

(ii.) Indirect Object: There are other forms of the above pronouns, meaning: "for me," "with me," "from me," etc., which extend through the three numbers and persons [see sect. 29].

16. Pronouns: Relative.

(a) Nominative. "Which," "who," etc., is not translated, the relative sentence being placed in close apposition with the subject:—

ma endfāiāna-tu ngonu-ma yi sea: ma tranāo =
man woman-to his-very own food gives: man good, i.e.
the man who gives food to his own wife is a good man.

(b) Possessive. Translated by the prepositional inflections -gāb or -na.

lantē-gāb ngia endrauba da-ana: yube nua-tchi =
girl-received from fish you took: I kick-will, i.e.

I will kick the girl { whose fish you took
from whom you took a fish.

(c) Objective. "Whom," "which," etc., is not translated.

agama endrauba wui: yube agama sia =
child you carry: I child see, i.e.
I see the child (which) you are carrying.

17. Pronouns: Definite.

This, that, etc., is translated:—

(a) By the object or article being here or there.

wokā etigāo =
kangaroo here, i.e., this kangaroo.
oka luba =
dog there, i.e., that dog.

(b) By the points of the compass.

daibe-dima de-ai =
bird (in the) west, i.e., that bird there.

(c) By the points of the compass, with luba (= there).

woru luba ae =
wallaby there south, i.e., that wallaby there.

(d) In exceptional cases by yinal (=?)

mara yinal daembaie =
men run, i.e., these men run.

18. Pronouns: Interrogative.

endrako? = who? whose? how?
e-ma? = from whom?
e-to? = to whom?
e-ka? = how many?
enai? = which? what?
daibe-dima enai? = what bird?
enai endrauba ageama? = Which (do) you like?

Note: The word endrako can only be used in the interrogative form.

19. Nouns and pronouns may be qualified by the suffix- ma, indicating one's very own, and by -ya, indicating only so much and nothing more:—

Questions.

endrako-ka? = how many?
" " " " ?
endrako? = whose?
endrako-ma? = from whom?

Answers.

pema-ya = one only.
suma-suma-ya = three only.
danu-ma = my own, mine only.
ngonu-ma = from him only.

It would also be correct to put the question in this form:—

(Q.) endrauba mriteka denata? = you much received?

(A.) ambute-ya = two only. But this method is not often used.

20. Indefinite Articles.—"a" and "the" are not translated.

21. Verbs.

(a.) The verb is very elaborate, and it is almost impossible to accurately classify all its diverse modifications. The verb undergoes no inflexions throughout the present, past, and future tenses for either number or person. As will be seen there is a difference in the termination of many of the verbs for the present tense. The inflections of the past and future are -na and -tchi respectively. Verbs always come last in the sentence.

<i>Present.</i>	<i>Past.</i>	<i>Future.</i>	
nua	nua-na	nua-tchi	= kick, wash.
aninge	aninge-na	aninge-tchi	= make.
doi	doi-na	doi-tchi	= burn.
ngoida	ngoida-na	ngoida-tchi	= empty.
tchui	tchui-na	tchui-tchi	= fall.
amboa	amboa-na	amboa-tchi	= break.
entrea	entrea-na	entrea-tchi	= sing.
adoi	adoi-na	adoi-tchi	= swim.
daembaie	daembaie-na	daembaie-tchi	= run, hunt.
laetcha	laetcha-na	laetcha-tchi	= step over.
foi	foi-na	foi-tchi	= cry, weep.
sea	sea-na	sea-tchi	= give, bring.
sia	sia-na	sia-tchi	= see, look.
dra	dra-na	dra-tchi	= build (hut).
kue	kue-na	kue-tchi	= keep, possess, have.
aseana	aseana-na	aseana-tchi	= vomit.
agabange	agabange-na	agabange-tchi	= lift (up).
ani	ani-na	ani-tchi	= shake.
raeta	raeta-na	raeta-tchi	= roast, cook.
untroa	untroa-na	untroa-tchi	= cut.
agoa	agoa-na	agoa-tchi	= drink, eat.
da-a	da-a-na	da-a-tchi	= steal, take.
wuya	wuya-na	wuya-tchi	= come.
dae	dae-na	dae-tchi	= bite, sting.
dorame	dorame-na	dorame-tchi	= live.
awoa	awoa-na	awoa-tchi	= die.
antchue	antchue-na	antchue-tchi	= fall.
mai	mai-na	mai-tchi	= hear, listen.
deni	deni-na	deni-tchi	= put down.
nai	nai-na	nai-tchi	= bind.
endani*	endani-na	endani-tchi	= twist.
wininga	wininga-na	wininga-tchi	= rub.
rompre	rompre-na	rompre-tchi	= paint, put upon.

* Cf. endagonini = something tied up, something kept for oneself.

The following should be noted :—

tchuruma = (without, empty), although used as an adjective, may be prefixed to verbs (often in abbreviated form) to indicate the absence of the condition the verb would otherwise express.

-mana is suffixed to verbs as well as to nouns, in order to denote a special vocation—

tchear = spear, tchear-mana = spear-maker.

fraladanu = rope, fraladanu-mana = rope-maker.

entrea = sing, song; entrea-mana = song-maker.

-agona is often added to the verb as a sign of the future tense.

tchumpro- (= first, before) is sometimes prefixed to verbs as a sign of the past tense.

(b) There is no proper passive form; this is expressed by transposition into the active :—

moa ma doi-na =

fire man burnt, i.e.

the man was burnt by the fire.

(c) The verb “to be” has no existence. The personal pronouns are used for the present tense of this verb.

(d) The verb “to have” is paraphrased, the possessive form of the noun or pronoun being used, or replaced by the verb kue- (= to keep, possess) :—

oka danu = dog my, i.e., I have a dog.

yube ko kue = I stick possess, i.e., I have a stick.

22. Verbs : Active.

(a) The inflexions of regular verbs in the past and future tense have already been shown in the preceding list, viz. : -na for the former, and -tchi for the latter.

(b) There are also other modifications of the verb with different shades of meaning :—

ago-a = to eat.

ago-yae = going to eat.

ago-wu = come to eat.

ago-awa = wait to eat.

ago-a-a = always eating.

(c) some special forms of the *Future*, etc.

(i.) “About to,” “just,” is translated by ora (= soon, by-and-by) or ora-oko (= now, immediately).

yube ora-oko tchear aninge-tchi=

I now spear will make, i.e.,

I am just about to make a spear.

(ii.) “May,” “can,” “perhaps,” “might” is rendered by -adea suffixed to the verb in the present tense :—

lube yeana-adea = he may hit.

(iii.) “May,” “can,” etc., is also translated by -la suffixed to the future tense of the verb :—

endrauba oka tcheana yeana: lube-datchi-la =

you dog not hit: he bite may, i.e.,

Don't hit the dog: he may bite you.

(iv.) “Would like to” is expressed by agona (= a sign of the future).

(v.) *Conditional* “if, would” is translated by the suffix -ga :—

ma danu yi esea-ga: yube ngonu troka esea-ga =

man to-me food give-if: I to-him fruit give-would, i.e.,

If the man would give me some food, I would give him some fruit.

(vi.) *Precautionary, cautionary* is rendered by -adea (= may, might, etc.) :—

endrauba yae tcheana: lube endrowba ya-tchi-adea =

you go not: he you strike-will-may, i.e.,

Don't go: he will strike you (if you do).

(d) *Imperative*. This is expressed by the commanding voice. In some instances -li is suffixed to the verb in the present tense :—

aniwi-li = fight!

broatcha-li = jump!

da-a-li = take!

(e) *Infinitive* does not exist, being replaced by the future.

ma lube adambar moa-na denatchi: lube degate agona =

man he cement fire-at will-place: it soft will (become), i.e.,

The man will place the cement on the fire to make it soft.

(f) *Participles and Perfects.*(i.) *Present.* This can only be expressed by the tone and accentuation of the voice, with the present tense of the verb:—

lante mbai aninge: lube tchui =
 girl dilly-bag make: she falls, i.e.,

While making a dilly-bag the girl fell.

(ii.) *Past* is rendered by using the past tense of the verb with-na:—

dojna-na = having burnt.
 yatchi-na = „ hit.
 yadend-hä = „ gone.
 prange-na = „ taken.
 aina-na = „ pinched.
 denata-na = „ received.
 agoana-na: lube ko untroa =
 having eaten: she wood cut, i.e.,

Having eaten she has cut firewood.

(iii.) *Future* does not exist, but can be expressed by the use of the past participle, followed by a future sentence:—

tchear romprena-hä: yube agoa-tchi =
 spear having painted: I will-drink, i.e.,

When I shall have painted my spear, I will drink.

23. Verbs : Reflexive:(a) “*Myself*,” “*thyselves*,” etc., is translated by the suffix -yā with the personal pronoun objective:—

yube ko untroa = I stick cut.
 yube niba-ya untroa = I me-myself cut.
 endrauba tchear rompre = thou spear paintest.
 endrauba neaba-ya rompre = thou thee thyself paintest.
 lube oka yatchi = he dog hit.
 lube noaba-ya yatchi = he him-himself hit.

24. Verbs : Defective and irregular, form a large proportion: In the following list, various compound and reduplicated words will be recognised:—

<i>Present.</i>	<i>Past.</i>	<i>Future.</i>	
tchue	tchuana	tchuae	= tell.
awatchi	tchitchi	tchitchi	= wait.
gama-gama	gama-gamana	gama-gamate	= climb up.
awena-wena	awena-wenata	awena-wenatchi	= climb down.
yeana	yatchi	yatchi	= hit, strike.
banu	baia	abauchi	= throw (a spear).
broatcha	broatchana	broatchata	= jump.
mina	narama	mata	= rise, stand up.
pra	prange	prangetchi	= catch, take, marry.
dena	denata	denatchi	= receive, get.
aentchina	aentchina	ora-gutchi*	= cover (up), bury.
agoa	anona	agoanate	= sleep.
gea	eneana	eneata	= sit.
ngaiekeka	ngaiekekana	haetrina	= blow (with the mouth).
ngunutchi	ngunutchertchi	agona-tchertchi	= feed.
dälbé	mine	mata	= fly.
tchangé	tchangena	baietchangetchi	= hang (up).
gaurutcha	gaurutchana	agodratchi	= kiss.
beroguto	berogutoni	berogutonite	= learn.
drae	endrana	endratchi	= let go, leave off.
woninga	woningatenda	woningatchi	= scratch.
ovamatchina	goini-ovamatchina	tcherimea	= perspire.
ena	aina	agona-aina	= pinch, squeeze.
woamba	woatima	ora-matchi	= remember.
ragemanedena	woateleanimena	ordetrimani	= forget.
esema	ebiyena	yata	= return.
ngoite	ngoidana	agaruwate	= spread (out).
maiangé	mainatcha	agona-maiange	= smell.
deana	tchumpro-deana	deatchi	= touch, feel.
nganu	nganubaie	nganubautcha	= spit.
wui	wuita	wuitchitchi	= carry.
foa	foagona	ambotchi	= break.
aniwi	aniwa	ora-aniwata	= fight.
yae	yae-na	yae-ta	= go.

* Oā = by and by, soon [Sect. 27].

<i>Present.</i>	<i>Past.</i>	<i>Future.</i>	
rietchi	rietchia	rietchitchi	= look out, observe.
naethina	tchumpro-tchina	oratchitchi	= know.
tchua	tchuana	tchuate	= speak.
tchua-kue	tchuana-kue	ora-tchuata-kue	= think.
batranima	tchumpro-manu	parimato	= grow.
ageama	tchumpro-gama	ga-amate	= like, love.
sine	sinegetchuni	sinegethorta	= sneeze.
ngona	ngogana	tchurtangoga	= cough.
agama	agamana	aga-amata	= laugh.
proruma	proruma	promata	= dance, play.
egai	egaine	egaitchi	= ask (something).
denawe	goinidena	agatchetchi	= sell, barter, buy.

25. Adjectives.

These are, as a rule, placed after the nouns they qualify :—

oka namatu lube agoa =
dog wild he sleeps.

ma wada lube yaeta =
man big he will go

Adjectives are also used as adverbs by being placed in an adverbial position (*i.e.*, before the verb) in the sentence :—

draba yurgama lube daembaie =
little-boy quick he runs, *i.e.*, the quick little-boy runs.

lante lube yurgama daembaie-tchi =
girl she quickly will-run, *i.e.*, the girl will run quickly.

Sometimes nouns are used as adjectives, and *vice versa* :—

adori = honey, sweet.
nua = rain, wet.
namatu = crocodile, wild.

Adjectives may be formed from nouns by the suffix-la or -ya.

A list of adjectives grouped according as they refer to weight, colour, shape, size, quality, and quantity :—

(a) Adjectives relating to *weight*—

agonu = heavy.
tcheora = light.

(b) Adjectives relating to *colour*—

eserama = white.
tcherma = white, clear.
t.-petro = purple (the colour formed by mixing red and yellow).
giawate = light in colour.
dralawada = red.
dona = dark.
nambera = black.
dera = green.

(c) Adjectives relating to *shape*—

agera = crooked, bent, curved.
abau-tchu = sharp-edged [abau = tooth].
abau-gana = sharp-pointed.
niangana = " "
awawi = flat.
agai-a = " (= spear-thrower, wommera).
abrama-tchina = straight in direction, upright.
parlema = straight, true.

(d) Adjectives relating to *size*—

beru = short.
aokotu = long, tall.
tro = thin, shallow.
dora = deep.
monra = "
wada = large, big.
padra] = "
draba = little (boy).
bamegana = small, little.
fabri = small.

(e) Adjectives relating to *quality*—

yurgama	= quick (in speed, motion).
lena	= sharp, smart.
tchiter	= slow.
adoa	= old, aged.
tranko	= good, well, healthy (nice both in taste and appearance).
enaideka	= bad (in character).
peru	= good.
watrika	= strong, hard.
sae-bruna	= hot (produced by the sun).
moa-bruna	= hot (" " fire).
darata	= cold, fresh (water).
d.-ngona (cough)	= a cold that has brought on a cough.
adori	= sweet.
yeina	= dry, thirsty.
matra	= bitter.
bortala	= bitter, salty.
dara	= ripe, ready.
eteta	= soft.

(f) Adjectives relating to *quantity*—

pema	= one.
ambute	= two.
suma-suma	= three. [All further counting, up to ten, is done with the fingers or hands.]
loba	= both, a pair.
mriteka	= much, plenty.
famegana	= little.
fabri	= small.
fraba	= few in number.
adadru	= many, in the sense of filled up.
sea	= some.
avanchina	= double (referring only to string and rope).
gagabida	= full to the brim.
tchurama	= empty, nothing.

26. Qualification of Adjectives.

(a) *Independently of direct comparison with others* :—

by the prefix *droiba* (= partly, fairly, &c.) :—

agama tranko	= good child.
agama droiba-tranko	= fairly-good child.
lante enaideka	= bad girl.
lante droiba-enaideka	= pretty-bad girl.

by the suffix *padra* (= large, big) :—

tranko-padra	= very (extremely) good.
wada-padra	= very (extraordinarily) big.

(b) *Dependently on comparison with others* :—

(i.) Similarity is expressed by *aga* :—

tcheat	danu	engao :	aganu	aga =
spear	mine	here	yours	similar i.e., this spear of mine is like yours.

(ii.) Difference is rendered by *tralawa* = another, different :—

agaia	aganu	engao :	danu	tralawa =
wommeras	yours	here :	mine	different i.e., these two wommeras of ours are different.

(It would also be correct to express the same idea as—

agai-a	loba	tcheana	tralawa =
wommeras	both	not	different.)

(c) *Comparatives* are formed by *esea* (= more) :—

wada	= big (strong)	esea wada	= bigger (stronger).
beru	= short.	esea beru	= shorter.
fabri	= small.	esea fabri	= smaller.
adori	= sweet.	esea adori	= sweeter.
ewintruma	= lazy.	esea ewintruma	= lazier.

lante	wada :	edentru	esea	wada =
girl	strong :	boy	more	strong i.e., the boy is stronger than the girl.

(d) *Superlatives* do not exist, but may be paraphrased by the use of the suffix *padra* = very, extremely [sect. 26 (a)].

peru	= good.	peru padra	= extremely good, the best.
beru	= short.	beru padra	= extremely short, the shortest.

27. Adverbs. Placed immediately before the verb in a sentence. From a constructive point of view they are either independent words by themselves, or else formed from adjectives. Among the former may be mentioned the following :—

naiete	= ready, finished.
na	= yes (affirmation).
tcheana	= no, not enough, no more, never, seldom, &c.
naroata	= perhaps.
sinderguna	= expression used when something is dropped, indicative of the undesirable, &c., = our "missed," "sold again," &c.
entrona	= half (measure).
droiba	= partly.
mriteka	= much, exceedingly, plenty, very (degree).
pamegona	= little (measure).
pepatra	= altogether.
pichi	= once.
ambutechi	= twice.
tchumpro	= first, before,
yurmana	= second, after, behind.
tchumpro guina	= first-born.
yurmana guina	= all children born after the first.
a-a	= ever, always, continually.
ye	= now-and-then, occasionally, at once.
ora	= by and by, soon.

Adverbs may be formed from adjectives by the suffix -ya :—

neadima	= sick	neadima-ya	= sickly.
pema	= first	pema-ya	= once.
adori	= sweet	adori-ya	= sweetly.
enaideka	= bad	enaideka-ya	= badly.

The comparatives and superlatives of adverbs are formed like adjectives.

28. Conjunctions.

"And," "also," "too," "more," *etc.*, is translated by esea (= more) :—

ngoe	danu	sea :	yi	esea =
water	to-me	give :	food	also, i.e., give me water and food.

(It would also be correct to express the same idea as—

ngoe	yi :	loba	danu	sea =
water	food :	both	to-me	give.)

"Perhaps," "either," "or" is translated by naroota placed before the noun, or by adea (= may) placed after it :—

de-ru	danu	sea :	naroata	moata =				
spear	to-me	give:	or	firesticks.				
endrako	esea	enaideka :	edentru	adea	lante	adea ? =		
who	more	bad :	boy	perhaps	girl	perhaps? i.e.		

Who is the worse? the boy or the girl?

29. Prepositions.

Prepositions, or rather what correspond to them in the English language, are signified by separate words and various suffixes.

They may be classified in the usual way ;—rest, motion, reason, and time.

(a) Rest in, Place.

engao	= here.
engao-ba	= very close to, here.
luba	= there.
luba-ba	= not far away.
luba-nama-nama	= there, far away, at the other end.
a-e	= south.
de-ai	= west.
deru	= north.
a-uru	= east.
gai-e	= inside (usual place).
na	= inside (for the time being).
bai-e	= above, at the top (<i>cf.</i> bai = hill).
bai-e-luba	= above, high up (up the river).
rai-me	= under, below, underneath.
kai-e	= below (down the river).
ga-na	= alongside.

- (i.) *in, at, close to, among, on, etc.*, can, as a rule, be expressed by the suffix -na, -yeana, or -gai-e, and in rare cases by -ta:—

yube badra-na gea =
I canoe-in sit.
yube andamru-na aninge =
I shade-in make (something).
agama mbai-yeana agoa =
child dilly-bag-inside sleeps.
daibe-dima ko-gaie gea =
birds bushes-among sit.

With numerals and certain prepositional forms only, the suffix -le is used:—

mbai goeteba-min =
dilly-bag yams-for.
mbai goeteba-min-le =
dilly-bag yams-for inside, i.e.,
in a dilly-bag for yams.

With the points of the compass, rest in, &c., is indicated by -ge.

To express the idea of continuity agonu (= always) or -ra may be used:—

deru-ge aganu =
north-in still.
lube wuchunge-na-ra =
he hut-in, still.

- (ii.) *around, round about*, is rendered by awo-ina (= a grass fence for catching fish, or a grass-shelter, and can therefore only be used in the sense of partly surrounded):—

wadraba-ba moa awo-ina gea =
old men fire around sit.

If the thing spoken of is completely surrounded, the suffix -munge has to be used:—

draba-ba mriteka moa-munge mina =
little boys plenty fire-around stand.

- (iii.) *between, among, in the midst of, &c.*, is expressed by zu-ru (= a plant to be found only in the midst of dense scrub):—

yube ko zu-ru agoa adea =
I bushes-among sleep may.

- (iv.) *above, on top*, is rendered by bai-e:—

ge-reta ko-na bai-e gea =
crow tree-upon top sits.

(b) Motion.

- (i.) *to, in, into, at*, is translated by -gi:—

ma tchea oka-namatu-gi ba-mu =
man spear dog-wild-at throws.

niba-gi = towards me, at me, hither. neaba-gi = towards thee, thither, &c.

"*As close as possible*," with each point of the compass, is expressed by -ba.

- (ii.) *from, person or place*, -yae, -gae or -na.

luba = there. luba-yae = thence.
lube wuchunge-gae wuya-na =
he hut from returned.
mara loba Weipa-gae yiata =
men both Weipa- from will return.
endranana troka adina-na dena =
woman fruit swamp-from gets.

- (iii.) *across, over*, translated by -ko with what is crossed:—

ma bai-ko gama-gama awena-wena =
man hill-across climbs up climbs down, i.e., he crosses over the hill.
lube dra-ko bai goaka =
he river-across top (to the) other side, i.e., he wades or swims, &c.
lube dra-ko badra-na goaka =
he river-across boat-in (to the) other side, i.e., he rows across.
endranana ko-ko laetcha =
woman tree-across steps-over.

- (iv.) *after, for, on the watch for, to hunt, &c.*, translated by -de when referring to inanimate objects, and by the verb danabai (= hunt, gather, &c.); when referring to animate objects:—

lante moa-de yaeta =
 girl wood-for will-go.
 oka danu adina danabai =
 dog my rat hunts.

- (v.) *around, round about*, is translated by the verb daembaie (= to run about) with -munga:—

amwoka padra ko-munga daembaie =
 kangaroo big tree-round runs.

to and fro is expressed by roka-.

banu = to throw.

roka-banu = to throw about, to and fro, hither and thither.

- (vi.) *up, among, through*, is, as a rule, expressed by -baie (= top, etc.) after a consonant, and -waie after a vowel.

- (vii.) *in company with, persons or things*: by -na.

It should be mentioned that if the things or persons in company with the individual in question are his or her own property, they are translated by the possessive form or by kue (= keep, possession):—

endranana agama-kue-na yaena =
 woman child-her-with went.

lube oka-ngonu-na yaena =
 he dog-his-with went.

lube mbai-na yaeni =
 she dilly-bag-with went, i.e., with a dilly-bag (not her own).

- (viii.) *behind*, avoina (= last): *in front*, tchumpro (= first).

(c) Purpose, reason, means.

- (i.) *to (donation)* is, as a rule, translated by -nu:—

naibeguta danu-ma edeutru-nu yi sea
 mother my own boy -to food gives.

- (ii.) *from, obtained or received*; person or place.

Translated by -ma or -yae according to the position in the sentence:—

lube goete-danu-ma drago denate =
 he sister-my-from fruit received.

yube yi entranana-yae denate =
 I food woman-from received.

- (iii.) *for, on account of*, can be rendered by -nu or -ngenu:—

oka-nu endranana ngoe seatchi =
 dog-for woman water will-bring.

dareta-ngenu mara gea =
 cold-on account of men sit.

maru dareta-nu gea =
 men cold-on account of sit.

- (iv.) *Exchanging something for something, bartering for, etc.*, is expressed by wame:—

wadraba tcheer-nu agai-a wame danu sea-na =
 old-man spear-for wommera in-exchange to-me gave.

- (v.) *for, constructing, making, etc.*, is, as a rule, expressed by -min:—

la-ina mbai-min esea =
 grass dilly-bag-for (making) bring.

- (vi.) *with, by, through*, is in most cases translated by the suffix -be:—

lante yi agoi-be aentchina =
 girl food sand-with covered up.

ma oka ko-be yeana =
 man dog stick-with strikes.

endranana derata-be neadima =
 woman cold-through the effects of sick

There are a few other suffixes which can be used, but they form only the exception, not the rule:—

fraladanu-name = rope-with, *i.e.* (tied up) with a rope. [*Cf.* nai = to bind.]
 egi-yambe, oka-yambe, etc., = snake-by, dog-by, etc., *i.e.*, bitten by snake,
 dog, etc.
 ngoe-ye = water-with, *i.e.*, covered with water.

(vii.) *without*, can be rendered by tchurama (= empty, nothing).

(viii.) *for holding or containing, for some special purpose.* Translated by -manu.

ngi tcherita-manu =
 camp bachelors-for, *i.e.*, a camp for single men only.
 dodo ngia-manu =
 net fish-for, *i.e.*, a net for catching or carrying fish.
 oka woko-manu =
 dog kangaroo-for, *i.e.*, a dog for hunting kangaroos.

(d) Time.

A short duration of time is rendered (up to three) by the number of nights slept. Then use is made of the fingers.

One hand stands for five, two hands for ten. Any definite longer period of time is expressed by moons (four weeks).

A year is divided into the rainy and dry season, or according to the prevailing North, West, and South-east winds. Anything beyond a year in the past is generally expressed by tchumprona (= a long time ago).

A day is measured up as follows:—

tcherma	= daybreak.
potro-tcherma	= daybreak, purple.
tcherma-na	= daylight, sunrise.
tcherma-nika	= twilight.
sae-barmu	= midday (sae = sun).
yeangena	= afternoon.
koyina	= sunset.
dona-paina	= dark, night (dona = dark, black).
goini	= yesterday.
goini-nganu	= the day before yesterday.
tchumpro	= first, before, front.
tchumpro-na	= a long time ago.
wangedima	= to-morrow.
wangedima-sae	= the day after to-morrow.
ora	= any time in the future, by and by, soon, afterwards.
ora-oko	= just now, at the present time.
yorgama	= soon, quickly.
agona	= will, future.
awatchi	= in a little while, wait.
a-a	= always (habit).
ngonu	= short (time).

tchermana ora ambo yiata =
 sunrise by and by we will return, *i.e.*, we will be back at sunrise.

roa pema-ya loba yaeta =
 moon one-only both will go, *i.e.*, both will go in a month's time.

ngi-na yube donapaina pema-ya anona =
 camp-in I night one-only slept, *i.e.*, I slept one night in the camp.

troka tchumpro agoatchi: ngia ora =
 fruit first will eat: meat afterwards.

Distance is measured by the number of nights a person spends on the road:—hence,

rako-yeana yube donapaina-ambute anona =
 road-on I nights-two slept, *i.e.*, it is a two day's journey, &c.

The same idea can also be expressed as—

yube donapaina-ambute niba-gi wuya-na =
 I , nights-two hither came.

30. Interrogation, Uncertainty.

Interrogation is usually expressed by the tone of the voice.

See also interrogative pronouns (Sect. 18)

In rare cases Pronominal suffixes in an abbreviated form are apparently made use of to indicate interrogation:—

yube daimbaie-tchi = I will run about. daembaie-be? = shall I run about?
 liba mata = we both will stand up. mata-ba? = shall we both stand up?
 naru amboatchi = they will break (it). amboatchi-na? = will they break (it)?
 lube nambera = it (is) black. nambera-be? is it black?

31. Exclamations.

koie	= calling attention.
woei	= surprise (by a sudden voice).
tchitchitchi	= vexation or disappointment.
sinderguna	= if something is dropped by accident.
yaroka	= admiration,
loko	= surprise (swift motion of a bird or fish).

Note: Anger and intensity are expressed by prolonging the last syllable in the sentence.

32. Aboriginal Songs.

The words of these chants, having been handed down from one generation to another, &c., possess no meaning to the local natives. These songs are used by many different tribes, and are known as:—

(i.) tchermatana: droned by the women at the death of a person:—

da-da ni-a u-ra in-a-na
 en-de-ka run-du-nga ar-an-dre
 en-degaru a-wen-awa-ma
 a-ru du-nge-me a-wen-tcha-we.

(ii.) tchuruta: sung by the men at some of their corroborees:—

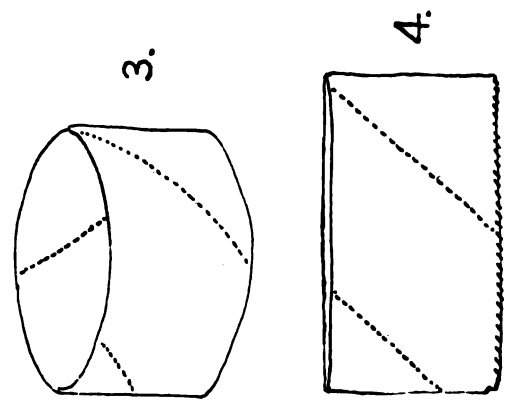
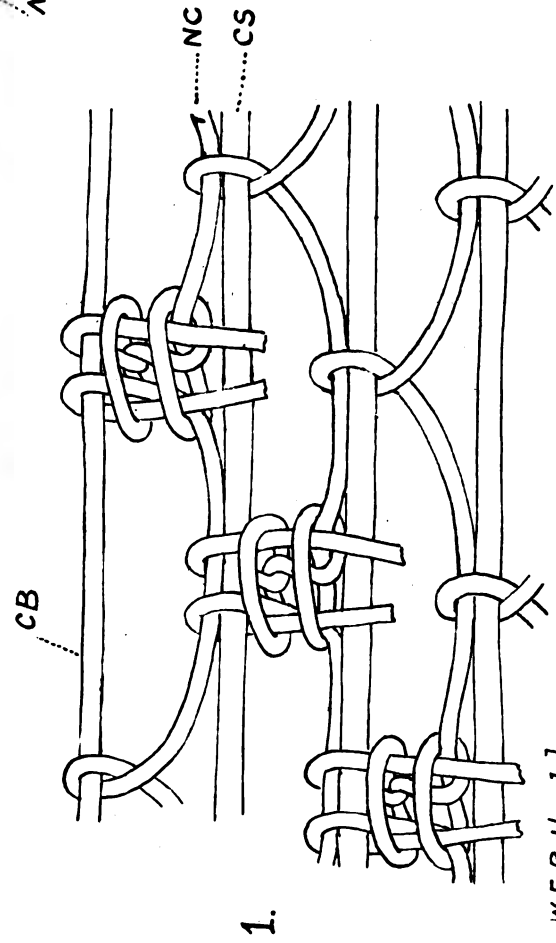
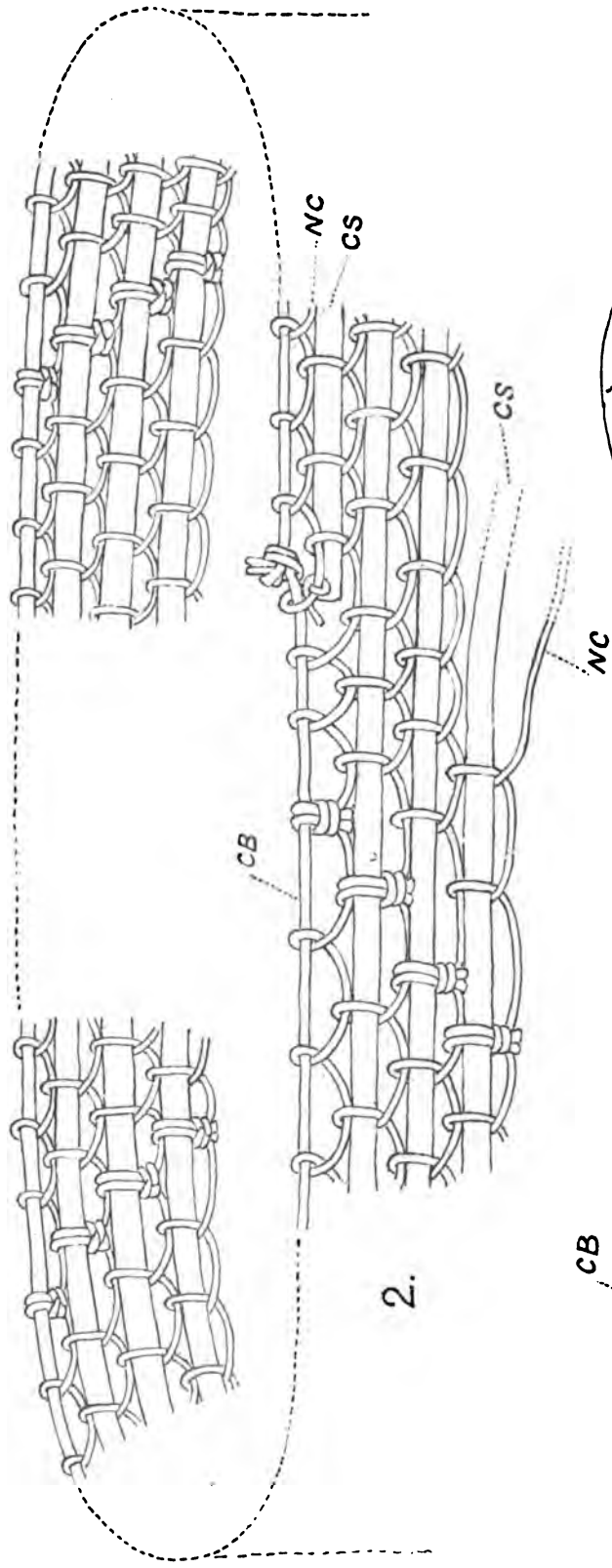
co-go pa-ri tchi-na dra-ngo
 yu-ro-go dra-ngo a-de-ma pro-ru-ma
 tchi-me ni-me-na tchu-go-tcho
 yu-ro-go dra-ngo le-te-um pro-ru-ma.

(iii.) ngambara: sung by the boys' mothers during the initiation ceremonies:—

a-we-i wa-nge we-i tchu mga nga-ra
 wo-do a-ga-ma la-nge-dru. (Repeated as long as required.)

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DOMESTIC IMPLEMENTS, ARTS, AND
MANUFACTURES.

BY

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PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND.

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PREFACE.

FAULT will probably be found with the inclusion in the present Bulletin of certain implements used for fighting and hunting purposes: similarity of origin and workmanship are my excuses in the former case, while omission from a previous Bulletin (No. 3—Food; its Search, Capture, and Preparation) is all that I can plead in the latter.

I regret the irregular sequence in which the separate branches of the subject have been treated: workers in the Field of Primitive Culture will, however, appreciate the difficulties attendant upon any attempts at obtaining logical order.

Of new tribes amongst whom enquiries have been made, I may mention the Gunanni (GUN), occupying the coast-line between the mouths of the Mitchell and Staaten Rivers.

In the selection of the stone-flakes and splinters for illustration I have had the valuable assistance of Professor Hermann Klaatsch, of Heidelberg, now on a visit to this country.

Through the courtesy of the Curator of the Technological Museum, Sydney, I have been furnished with analyses of the various gum-resins, etc., by Mr. Henry G. Smith, F.C.S.: all the specimens forwarded to him were collected by myself.

Mr. Chas. Hedley, F.L.S., and Mr. F. M. Bailey, the Colonial Botanist, have continued to render valuable help in the way of identifying molluscan and botanical specimens respectively.

Mr. B. Etheridge, Curator of the Australian Museum, Sydney, kindly undertook the task of revising my manuscript: I am deeply indebted to him for the many suggestions and notes he has supplied me with.

WALTER E. ROTH.

1st August, 1904.

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DOMESTIC IMPLEMENTS, ARTS, AND MANUFACTURES.

1. Wood-Work.—What with the introduction of scrap-iron and modern tools, and their consequent trade and barter, the working of timber wholly by aboriginal appliances is so rare nowadays that it is no easy matter to collect reliable information concerning the methods formerly, and sometimes still, employed.

The *removal of bark* from its tree is usually effected at the end of the wet season when the sap is up and the bark slips. When a sheet of bark from the whole circumference of the tree is required, it is of course only necessary to make two transverse incisions, with a longitudinal one joining them: the removal is assisted by tapping upon the sheet with stones, stone-hammers, etc. At Keppel Island, to split the Melaleuca bark from the subjacent tissues, the natives used a special implement made of mangrove (balpan) in the form of a thinnish stick tapering to a point at each extremity, and called bungga, the same name as the tea-tree from which it removed the bark: the procedure was to apply the implement from above downwards in and along the longitudinal incision, and so peel off the sheet. Further treatment of the bark—*e.g.*, the picking off of its inner surface with stiletto, etc.—is necessary in connection with the manufacture of blankets, some canoes, and certain water-carriers.

2. Treatment of Timber.—It would appear that some kinds of timber, unless immediately tackled after removal, become too hard to work upon, and accordingly had to be soaked for some two or three days in water before anything further could be done (Batavia River). If the sapling or limb permitted—so far as required shape and size were concerned—it would be hacked with a celt or shell (sect. 28) and then broken away: the mucronate extremities of the Wellesley Island mallets may probably thus be accounted for (sect. 38). When it was necessary to remove a length from out of the trunk or flanges, transverse cuts were made above and below, vertical ones at the sides, and the intermediate portion split off or slowly hacked away. Splitting of timber was practised on rational principles in that a wedge was used: the Brisbane blacks (*T. Petrie*) employed a wooden one (Fig. I.) at the extremity of the log, while the Tully River natives used a celt or celts driven along its sides. On the other hand, to prevent wood from splitting, the Pennefather River aboriginals adopted a method of burying it underground for several weeks. In order to lighten the weight as well as to prevent splitting, the Tully blacks even to the present day (*E. Brooke*) treat the timber for the manufacture of their shields as follows:—The defensive weapon, in its rough state, is soaked for a few days in water, placed in the sun for half a day, slowly dried in a shady scrub for two or three days longer, and immersed again: after the second immersion it is tied on the flat, *i.e.*, in a horizontal plane, to an overhanging bush, tree-fork, etc., about a foot above the water surface, and left there for between one and two weeks. [It would appear that certain of the local European settlers have adopted this process of soaking and drying timber for purposes of boat-building, and in the manufacture of mauls.] Wood can be hardened by charring in the fire, a great desideratum in the making of digging-sticks and fighting-poles. The aboriginals practise various methods for bending or straightening timber, either when already cut or in the rough. Thus, a dry heat in ordinary sand, a moist heat from burning freshly-gathered leaves, or moisture in general, such as soaking in water, is utilised for bending any of their wooden implements into shape as required. At Cape Grafton I have seen boomerangs being immersed in water for weeks at a time, to allow of their being twisted into the particular curves desired. With the alleged object, in some cases, of maintaining and preserving the timber in the position attained by one or other of the preceding processes, the whole is covered thickly with fat, saurian or mammalian. In the old Brisbane days (*T. Petrie*) the wooden troughs and shields were, after completion, rubbed over with warmed bees' wax, but whether for preservative purposes or not, it is now impossible to say.

3. The trimming-up of a roughly-hewn piece of wood is effected with the agency of various shell- (sect. 28) or stone-scrapers (sect. 26), and finally completed with one or other of the different polishers in vogue throughout that particular district. Speaking of the Endeavour River natives, Captain Cook [*Hawkesworth Ed.*] says, "For polishing their throwing-sticks, and the points of their lances, they use the leaves of a kind of wild fig-tree which bites upon wood almost as keenly as the shave-grass of Europe, which is used by our joiners." Even at the present day, the leaves of the *Ficus opposita*, Miq., are used on the Bloomfield and Laura for "polishing" the spear-throwers, while those of the *Ficus orbicularis*, A. Cunn., are employed on the Pennefather for "smoothing-down" the ear-rings. On the Tully River where, at its mouth and neighbourhood, pumice-stone is always met with, this article is employed for "polishing" the wommeras and spear-tips. On Keppel Island I have seen the same effects produced by rubbing the article across the front teeth.

4. Morticing, Splicing, Wedging.—When a concave surface is required, *e.g.*, "dug-out" water-carriers (sect. 62), this is produced by first of all having the wood perfectly dry, and then picking over the area with a piece of hardened-pointed stick, a stiletto (sect. 44), or "native-gouge" (sect. 27), with which a good deal of the wood, especially if soft—and it is for this reason that it is chosen—can be got away: some red-hot cinders are next placed on the excavation, and after being blown upon and removed, the surface is again picked out or gouged, and the process thus repeated until the desired depth is obtained. A similar method was adopted in the manufacture of the socket-hole at the distal extremity of the Batavia River harpoon (sect. 66), in the sunk handle of the shields, and is still in vogue in the method of morticing between the shaft and barb of many spears: such a mortice (sect. 43) for these last-mentioned weapons is, however, in some districts, *e.g.*, portions of the Peninsula, replaced by a species of bamboo, where the natural hollow of the stem is availed of. The Wellesley Islanders and certain Georgina River natives use a splice in the manufacture of their spears. Wedging is practised on the Eastern and Gulf-coasts as well as on the Wellesleys (sect. 31).

5. Fire is obtained either by "twirling" or by "sawing," one upon the other, two pieces of stick.

Twirling.—In the Peninsula and far Western districts, the fire-sticks are in the form of two similarly thin wands, extending to a length of from two to four or more feet. In the latter areas they are generally thrown aside, discarded, after use: they are just made as they are wanted, and so are not usually seen carried about. In the Peninsula, however, both on mainland and coast, where they are retained, their "business" ends are preserved and protected by a special cap or cover (Figs. 2, 3, 4). On the Batavia, Pennefather, and Embley Rivers (Figs. 5, 6, 7, 8, 9) this cap is made of a piece of pandanus leaf bent over the extremities of the two sticks, bound round with twine, and covered over with warmed bees' wax, which thus "fixes" the cover after it has been moulded into shape: it is then finally dabbed over with one of the local gum-cements or bees' wax, with a knob at its extremity, into which the *Abrus precatorius*, Linn., berries or "Jequirity seeds" are stuck (Fig. 2). Where available, the use of these berries (NGG. do-anjinjin; KYI. bandir-bandir) is almost universal: on the Palmer River they may be substituted by, or employed in addition to, the seeds of the *Adenanthera abrosperma*, F. v. M. (KMI. rokowarra): on one occasion, at the Pennefather, I observed the use of the "gastroliths" or "crab's-eyes" (Fig. 3) of a large crab. The cap or "matchbox," as it is sometimes called by the European settlers, can also be made of two pipes bound together (Fig. 4), and closed at their distal extremities with bees' wax: these pipes are formed from a light pithy kind of wood, from out of which the pith is removed by means of a bone pin or awl (sect. 43). Occasionally, two pieces of bamboo are utilised for a cap. The material out of which these two similar wands are made is one or other of the following timbers:—

Xanthorrhæa arborea, R. Br., and other species of grass-tree: the most common of all, and utilised wherever available. Along the eastern coast line, say, from Cairns to certainly as far south as the Fitzroy River, there is a shorter form of fire-stick, both constituents being made of this material, but with one of the wands replaced by a split length: furthermore, there is no "matchbox" in connection with it.

Premna Dallachyana, Benth., KYI. Ckn. taralka, KRA. mo-yil.—Fire-sticks made of this material are said to withstand the moisture of the wet season far better than the ordinary "grass-tree" ones. From the Endeavour River up to Princess Charlotte Bay.

Premna obtusifolia, R. Br., NGG. mo-odo (cf. NGG. moa = fire), MAL. ngalki.—Pennefather and Tully Rivers.

Clerodendron inerme, R. Br., KMI. ochi-illa.—Pennefather River.

Clerodendron floribunda, R. Br.—Upper Cloncurry and other rivers (*E. Palmer*).

Psychotria sp.—Mitchell River (*ibid.*)

Sesbania aegyptiaca, Persoon.—Cloncurry (*ibid.*)

Ventilago riminalis, Hooker.—Cloncurry, etc. (*ibid.*)

The late W. T. Wyndham, the first settler on the Keppels, told me that the islanders often carried about their grass-tree sticks alight, as they smouldered well and slowly, and thus saved the trouble of making fresh fires. Women never carried the fire-sticks, the only exception known to me (on the authority of *R. Hislop*) being on the Bloomfield, in the old days, when the females might carry them on the hunting expeditions.

6. There is another and shorter type of fire-stick in vogue throughout the area extending from below the Endeavour to the Herbert Rivers, with its corresponding hinterland (Atherton, etc.): owing to the advance of settlement within recent years, it is impossible to state with certainty its true southern limits. Two peculiarities of these shorter forms of fire-stick are that the shape and material of the two sticks are dissimilar (Figs. 10, 11, 12). The vertical piece is a thin wand up to 15 inches long, while the horizontal one is of a flattened elongate-oval form from about 8 to 12 inches long: the former is made of the "cotton-tree," *Hibiscus tiliaceus*, Linn. (MAL. mancha), or of a wood known to the lower Tully River blacks as kutchi, the latter of *Mollinedia subternata*, Bail. (MAL. wonda), *Cryptocarya Murrayi*, F. v. M. (MAL. ku-janguru), a split length of *Calamus* sp., or of a timber called by the Tully natives pokarilla. For purposes of transport, these smaller varieties of fire-stick are wrapped round, parcel-fashion, with Melaleuca bark, and so carried in the men's dilly-bags.

7. To describe the process of obtaining fire by twirling, I cannot do better than first of all quote the description which Captain Cook gives of this method:—"To produce it [fire] they take two pieces of dry soft wood, one is a stick about 8 or 9 inches long, the other piece is flat: the stick they shape into an obtuse point at one end, and pressing it upon the other, turn it nimbly by holding it between both their hands, as we do a chocolate mill, often shifting their hands up, and then moving them down upon it, to increase the pressure as much as possible. By this method, they get fire in less than two minutes, and from the smallest spark, they increase it with great speed and dexterity. . . ." (Fig. 13). To make a beginning, the horizontal stick may have a small excavation punched into it with a sharp stone, etc. (Fig. 14), so as to give the extremity of the vertical one (Fig. 15) a firmer basis of support, it being very liable otherwise to slip off the rounded edge. Indeed, partly to prevent this contingency, the horizontal piece (unless specially cut out *en bloc* into its flattened shape) may sometimes be made, as already mentioned, of a split length of lawyer-cane or grass-tree, so as to afford a flat surface upon which to commence operations: in other cases, an old "excavation" may be used several times over, until, in fact, a hole is burnt completely through (Figs. 10, 11, 14, 16). What with the firm downward pressure, and simultaneous twirling with the flats of the hands, a circular concavity very quickly results (Fig. 14): if a fresh one, some charcoal dust may be placed in it. As the concavity is being formed, the finely triturated particles removed from it collect like a miniature dust-heap around its mouth. Piled up on the underlying leaf or ground, and covering over that portion of the edge of the horizontal piece contiguous with the excavation, is a small pinch of fine dried-grass particles, pith-dust, bits of the prickly tops from the grass-tree, etc., arranged in such manner as actually to touch the edge of the excavation: on a windy day especially, and commonly to save labour, the pile of dried grass, etc.—the "tinder"—may be led up along an artificial nick extending from the excavation to the edge. As the finely triturated

dust-particles from the horizontal piece become heated, blackened, smoked, burnt, and removed by the simultaneous twirling and friction, a spark forms and comes into contact with the tinder: directly this takes place, the latter is quickly whipped up, usually with a bunch of dried grass, swung round and round in the air, perhaps blown upon, and so made to burst into flame.

8. Though fire-sticks are usually named from the timber out of which they are manufactured, they may have a special name applied to them:—KYI. burlal (*cf.* burla = both, a pair), NGG. moa-ta (*cf.* moa = fire, mo-odo = timber utilised in its manufacture), PPT. turkinji, MAL. chi-man, KYE. Bld. tchi-mal, B's H. mannibal, KUG. ko-kal, etc. Occasionally, in the dissimilar shorter forms, and independently of the material of manufacture, the two sticks may be specialised by different terms: thus at Cape Grafton and Atherton, the vertical and horizontal pieces are named KUG. gini, NGA. wunda, and KUG. marku, NGA. marba respectively.

9. *Sawing*.—The only district in North Queensland where I have observed this method of producing fire is on the upper Georgina River among the Workai-a aborigines. The first occasion I saw it was in the neighbourhood of Camooweal. A dry piece of the *Capparis umbonata*, Lindl., known locally as the "wild-orange," usually an old piece of dead branch $2\frac{1}{2}$ to 3 inches diameter, and from $1\frac{1}{2}$ to 2 feet long, is split at one extremity and a small wooden chip or stone inserted, so as to keep the wedge open. Into the clutch of the fork so produced, some fine dry grass, blanket-shred, or other form of "tinder" is placed (Fig. 17). This piece of timber, with the plane of the wedge vertical, is fixed in position by means of the operator's two feet pressing it against a small stake fixed firmly into the ground. The "saw," 7 to 8 inches long, of similar material, is roughly shaped into a narrow spatulate extremity (Fig. 18): its base is firmly gripped by one or both hands, which press the edge of this saw over and across the wedge, and simultaneously rub it rapidly backwards and forwards. Owing to the comparatively soft texture of the timber, a groove is soon formed, the timber becomes heated and blackened, and in a very few minutes sparks fly, and the tinder catches alight. In no case, to make a start, was the groove originally cut with a knife or other implement. The pieces are discarded after use.

At Monkira, on the lower Diamantina, in 1886, and in the Belyando district, between 1878 and 1880, Messrs. F. C. Trotman and R. Hislop respectively, tell me that they have seen natives obtaining fire by identical means of sawing. [The same method was in vogue on the Lachlan River: an authenticated specimen is in the Australian Museum, Sydney (*R. Etheridge*).]

10. *Fire-tongs*.—On the Bloomfield River fire-tongs are met with, made of a split piece of lawyer-cane (*Calamus*) bent double (Fig. 19). Not only are they used for picking up hot ashes, but also stones for baking purposes. The Cooktown blacks call these implements koragora, after the plant from which they are manufactured.

11. *Shell- and Bone-work*.—An essential in shell-work is that the material must either be fresh (sect. 55), or if "dead," that it must previously be soaked: in a dead shell, the line of fracture will not follow true on that of the percussion.

Bone may be chipped or ground in the manufacture of awls (sect. 43), and ground in the making of a stiletto (sect. 44): the grinding process can be effected both dry and wet. Bone, however, is usually worked when comparatively fresh.

12. *Leather-work*.—Leather underwent certain operations in connection with the preparation of opossum-cloaks and kangaroo-rugs. Thus, among the Brisbane blacks T. Petrie says that the fresh hide was removed with shell or stone by a vertical incision up the belly, connecting with a transverse cut below the level of the arms, and with another above the level of the legs: an arrangement which allowed of a squarish piece of skin being obtained. This was next pegged out in the sun, rubbed over repeatedly with ashes, any flesh or dirt removed, and the hide finally dried. The Rockhampton aborigines informed me that the exposure to the sun and consequent rate of drying was and could be purposely modified, according to circumstances, by shading over with fern-leaves. True tanning of the leather is practised in the course of manufacture of skin-bag water-carriers (sect. 56) by means of "coolibar" gum moistened with water.

13. *Gums; Resins, Cements*.—*Gums, etc., of vegetable origin* are obtained from the following plants, generally have their own particular preparation, and are usually named after the tree whence they are derived:—

Aleurites moluccana, Willd. "Candle-nut."—On the Bloomfield River (*R. Hislop*) the nut provides the "oil" used in fixing the ochre for spear-painting, etc.

Alstonia scholaris, R. Br.—The sticky exudation on the bark is employed for smearing over the body with which to affix the feather-down, for purposes of personal decoration. Tully River.

[*Araucaria Cunninghamii*, Ait.—The gum of this Moreton Bay Pine was warmed and worked up with the fingers in the old Brisbane days (*T. Petrie*).]

Canarium australasicum, F. v. M.—On the Bloomfield River, the dry lumps of gum are gathered off the tree, known locally as "brown cedar" or "Mackay cedar," and are either wrapped in leaves and baked, or just warmed before a fire, and then pounded between two stones till pliable and soft enough for use. To prevent any sticking to the hands or stones, both are rubbed with grease of various kinds. Used for fixing together the haft and shaft of spears, and in the old days (*R. Hislop*) was employed for fixing the stone-celt into its handle. KYE., Bld. tchaln-ji. Though the tree is not growing in the immediate vicinity of Cooktown and Cape Bedford, the local (KYI.) blacks know the gum as kun-dar. On the Batavia, Pennefather, and Embley Rivers, the cement is prepared in two ways:—(a) That from the outer bark is boiled with stingaree-fat in a Melon shell (sect. 55), and used for covering over the twine, etc., fixing the wommera peg, or that tied on the junction of haft and shaft of a spear, or that fixing its barbs. (b) The gum obtained from the inside of the hollow tree is roasted on the ashes and

hammered: it is only used for the handle of the wommera to prevent it slipping from the hand. The tree is known as adambar (NGG.), whence the gum in the rough receives its name, though it may also be described as its "fruit" (NGG. troka).

"This resin is in large tears, is brittle, and readily powders: it has a bright fracture, and in physical appearance resembles a dark colophony or resin of commerce. It readily melts, burns away with a very smoky flame, and gives an odour of ordinary resin. It softens easily when rolled between the fingers, and becomes quite soft at 40 degrees C. It consists almost entirely of a resin soluble in petroleum ether (a very unusual occurrence with resins). It is entirely soluble in ether, but is largely precipitated by the ethereal solution by alcohol. This peculiarity is only known to a few resins. . . . It melts readily in boiling water, emitting an agreeable aromatic odour. It is very indifferently soluble in alcohol. . . . (H. G. Smith)."

Canarium Muelleri, Bail. —The resin of this tree, known to the Bloomfield River natives as yikari, is largely traded and bartered. The prepared article is described as follows:—

"This resin consisted principally of small lumps coated externally with ligneous material, as if it had existed originally filling fissures in the tree. When broken, the resin is semi-opaque, with a dull fracture, except in the case of a few tears, which were perfectly transparent. That this semi-opaque appearance is a physical character is shown by the fact that when the resin is melted and allowed to cool, it forms a transparent mass like glass, showing that it contains no constituent causing this opaque appearance. It is a soft resin, and easily melts: it can readily be moulded between the fingers. When burnt it has an agreeable and persistent aromatic odour. It powders easily and is readily almost completely soluble in alcohol, ether, and petroleum ether. There are at least two acid resins present, the potassium salt of one being slightly soluble in alcohol. This resin would make an excellent cement, and it would probably have a value commercially provided it could be obtained in quantity, and the dark semi-decomposed portions discarded. . . . (H. G. Smith)."

Erythrophloeum Labouchei, F. v. M., "Ironwood," probably the "Leguminous Ironbark" frequently mentioned by Leichhardt (*Maiden*).—When a suitable tree—the younger the better—has been found, its underground roots are cleared, and pieces of convenient length cut away. The outer sticky covering is cleared with a bark-strip pulled steadily upwards (Fig. 20). A sufficient quantity of the sticky mass having at last been obtained, it is lightly roasted over the fire, and hammered between two stones: at Cooktown, the latter are greased with the oily nut of the *Calophyllum inophyllum*, Linn. It is then roasted again and hammered, and so on alternately, until quite soft, when it is finally allowed to cool and harden. Ironwood gum used to be manufactured on the Bloomfield: before the underground piece was cut away, it would be tested by rubbing a fire-stick onto it, getting portions of the sticky covering to melt off, and trying them between the closed teeth—if sticky there, the gum would be suitable for use, and further pieces removed (*R. Hislop*). A defect in this material is its liability to crack. I have seen it in use among the natives of the Endeavour, Laura, and Palmer Rivers, along the Princess Charlotte Bay coast line, and on the Gulf coast, between the Mitchell and Staaten Rivers. KMI. tchal-nga (named differently to the tree, which is ariga): KYI. Ckn. gambar; GUN. aldéma "This sample of cement is a tongue-shaped homogeneous mass, almost black externally: it has a dull fracture, and the surface of the fracture is a vandyke-brown colour. In the mass the cement is very hard, and does not soften between the fingers. At 50 degrees C. it softens, but hardens at once when removed from the water. At a higher temperature it softens readily, especially in the flame. It burns readily, with a smoky flame, leaving 31.75 per cent. of a very fine, soft, ferruginous clay. It seems to be an excellent cement for the purposes for which it was made. . . . The ash consists of a very fine clay, with scarcely any free quartz as sand. . . . After the resin was entirely removed with alcohol, and the residue dried and afterwards boiled with water, only a very small amount was dissolved. The residue contained some admixed organic matter, with excess of carbon, which burns like tinder, and gives out an odour like burnt grass. Only a small amount (1.38 per cent.) of a soft oily resin was soluble in petroleum ether. The principal resin is of a dark-brown colour, and is somewhat brittle, and melts at a low temperature: it ignites readily, and burns with a smoky flame, leaving an excess of carbon. It is readily soluble in alcohol, but less so in ether. It dissolves in concentrated sulphuric acid, with a crimson colour, best seen when the particles are drawn through the acid, and is precipitated as a brown precipitate on addition of water. . . . It is remarkable how closely the resin agrees in every respect with the resin obtained from *Spinifex*. . . . The composition is—clay 31.78 per cent., brown resin 48.37 per cent. by difference, oily soft resin 1.80 per cent., soluble in water 1.75 per cent., admixed organic matter 16.30 per cent. . . . (H. G. Smith)."

[*Eucalyptus corymbosa*, Sm.—This "bloodwood" gum was warmed for use, and mixed with spittle to make it set, by the Brisbane blacks (*T. Petrie*).]

Ficus sp? (A comparatively rare species, which, owing to the incompleteness of the specimens I forwarded him, the Colonial Botanist has been unable to identify.) The tree is very scarce now on the Tully River, where it was formerly utilised as follows:—After removal of the bark the sticky mass is scraped off from its inner surface with a shell, and collected onto the end of a small stick: the latter is twirled round and round in the process, warmed over a fire and hammered—it is hardly touched with the fingers. The article so prepared is used as a "bird-line." Cockatoos can be caught by smearing it along the branches on which they roost, while small parrots are trapped by rubbing it along the leaves and branches in the neighbourhood of certain of their food-flowers. MAL. chimbun.

Grevillea striata, R. Br.—"Bastard Beefwood." The cement is obtained from the roots of young trees only, that from the older ones not being removable. Convenient lengths, from 10 to 12 inches, having been cut away from the underground saplings, they are heated over a fire, and their outer sticky bark scraped off with a sharp-edged stone. These little scraped-off chips are now tied up in a sheet of tea-tree bark, the bundle being next baked for some ten minutes or so, when it is opened and the sticky bits removed and pressed together with the fingers and hands to render them sufficiently inter-coherent. The mass so formed is then ready to be pounded between two stones, which, as in the case of the *Erythrophloeum*, are at Cape Bedford, Cooktown, etc., greased with the *Calophyllum* nut. After the

hammering, the mass is stuck onto any convenient stick, whereby it is held over a fire: it is again hammered and heated, and so on for some considerable time, until the required consistency is obtained. The consensus of opinion among the natives is that it is the strongest and most durable of all their cements. I have seen it employed along the same areas as the *Erythrophloeum*: at Cooktown, however, it is getting very scarce now, all the trees in the close vicinity having been destroyed. KMI. otwarla, KWA. KLA. aru-in, KRA. arau-ang, KYI. Ckn. mari-mari, GUN. ol-da. At Cloncurry, along the Georgina, and on the Diamantina, a species of *Grevillea* is utilised as follows:—Pieces from the inside core of a dead tree are collected and roasted over a fire, when the melting blobs of gum are allowed to run out below onto a sheet of bark or into the sand: after cooling, these are collected, warmed up, and hammered together, and, while still pliable, mixed with charcoal. The Cloncurry name for this cement is tunggaro.

"This specimen is a crudely manufactured cement consisting of a portion of a flattened finger-shaped mass. It is of a vandyke-brown colour, and has a dull fracture. On heating, it readily melts, soon ignites, and burns with a very smoky flame, leaving a somewhat large amount of a ferruginous sandy clay residue (17.08 per cent.). A slight heat is sufficient to soften the mass, which can then be moulded into any form, but becomes hard on cooling; the heat of water at about 50 degrees C. is quite sufficient to make it soft enough for moulding, but on removal it soon becomes hard again. . . . The greater portions of the resin are soluble in petroleum ether (boiling below 50 degrees C.), the dissolved resin being soft, and of a dark colour. It is but slightly acted upon by concentrated sulphuric acid. It is also readily soluble in ether, but is mostly precipitated by alcohol. Alcohol had little action upon the original mass. A considerable amount of the carbonaceous matter was present, together with the clay as an admixture, and was removed by ignition, after removal of the resin (*H. G. Smith*). [Mr. Smith states, however, that the specimen of resin forwarded him by me does not agree with the specimens in the Technological Museum, Sydney.]

Leptospermum Fabricia, Forst.—The outer bark is chipped off, and the pieces, which are full of resinous material, rubbed over the spear, etc., that requires painting: the portions of the weapons so treated are warmed and well rubbed, the adherent particles forming the medium or vehicle for the pigment, which is next well warmed, rubbed in again, and so rendered permanent. Pennefather River. NGG. bai.

Melicope australasica, F. v. M.—Can be prepared in a comparatively short time by removing the "gum" exuding at the bottom of a one- or two-day-old split, warming, and then hammering between two stones: to render it more tough for final use, it is mixed with charcoal and again heated and hammered. Tully River, MAL. ngobi. This, the most generally used of the cements in the neighbourhood of the Tully, affords a generic term for other kinds of cement locally obtained.

"This specimen was a flattened, dark-grey coloured mass, like button shellac: it was very brittle, readily powdering between the fingers; it also softens a little; it readily melts in boiling water, emitting an odour strikingly like that given by ordinary shellac under like conditions, but very brittle on cooling. It burns away with a very smoky flame; it is only slightly acted upon by petroleum ether, and only a very small amount is dissolved by ether. It is readily soluble in alcohol, leaving a small amount of debris. It is a very good resin, and would make a good cement (*H. G. Smith*)."

Panax Murrayi, F. v. M.—The "Pencil-wood" of southern New South Wales. Prepared in a way similar to the preceding, but requiring much longer time: it can be got out from a split of any age by alternately warming and hammering, but no charcoal is purposely added. Tully River. NGG. buragal.

"This cement is a portion of an irregularly rounded stick-like mass. . . . it is almost black in colour, and although soft, it is not sufficiently so to become plastic between the fingers. It softens readily, however, when slightly heated and readily melted to a black tarry-looking mass. On ignition the organic matter burnt away with a smoky flame, leaving 5.72 per cent. of inorganic matter, consisting of a soft grey-coloured clay, only slightly ferruginous. The resins were completely soluble in petroleum ether, ether, alcohol, although but slowly in the latter menstrum. The resins were brittle, almost colourless, and very bright. The material also contained a good deal of carbonaceous matter, which readily burns away with a characteristic burnt-grass odour: it is this material which gives the black colour to the cement, as the resins are light-coloured. . . . (*H. G. Smith*)."

Triodia Mitchellii, Benth.—The "Porcupine-grass" or "Spinifex-bush" of the far western districts. The plant is gathered in large quantities, broken up into small pieces with the fingers, and still further disintegrated and pounded with stones: the lump so formed is next rolled over and over, pounded upon a heated flattened stone, and so, with the sticky matter in it, rendered down into a dullish brown-black pasty mass, which, soon hardening, is put by for subsequent use. No water, wax, or other ingredients are utilised in its manufacture. It remains remarkably hard and firm, and, like all other native gums, only requires heat to soften it again. It is employed for fixing stone-flakes (adzes and knives) into their handles. Known as kanti at Boulia, Glenormiston, Roxburgh, Carandotta: as anggora at Camooweal.

Xanthorrhoea arborea, R. Br., and other species.—"Grass-tree." The gum, found as it is in lumps in amongst the roots, only requires heating before use. KYE. tun-ja, kannojó-ol, KYI. Ckn. C. Bd. punga, KMI. korta (a word differing from the native name of the plant).

There is another cement, the Kalbuwur, the vegetable origin of which I have so far not been able to get identified. It is obtained at the head of the Daintree River, from a tree in appearance something like the "shea-oak": it passes here, as well as at Butcher's Hill, and at Cooktown, under the same name, but on the Bloomfield it is called chakki, the term applied to any gum.

"This cement is in irregular lumps, having a purplish-brown colour in the fracture, but almost black externally. It is sufficiently hard not to become plastic when pressed between the fingers. In water at 50 degrees C. it softens slightly, but soon hardens when removed. At a higher temperature it softens readily. In the flame it runs quickly, and takes fire readily; when thus melted it can be readily moulded, and sets hard quickly: . . . the small amount of admixed clay is remarkable in reference to the other cements. On ignition, a large amount of carbon was found to be present, and the amount

of inorganic constituents was only 2.47 per cent. Only a very small amount was soluble in petroleum ether, but a resin was dissolving in ordinary ether which was yellow on evaporation. In alcohol the whole of the resin was dissolved, having a deep red colour: the organic matter is then left behind. This resin acted in every way like a Red Grass-tree Resin, it formed a red varnish, melted at exactly the same temperature, and when heated side by side with grass-tree resin no difference could be detected in odour, etc. Its reactions with sulphuric acid and other reagents were also those of grass-tree resin. Water also dissolved from the original material an acid liquid which deposited microscopic crystals on evaporation. The resin thus bears a remarkable similarity to grass-tree resin. . . . The organic matter consisted of a brown powder, and burnt like tinder, with a burnt-grass odour. Particles of woody fibre were also detected. It seems probable that this organic material is added to the resin to overcome the brittleness; but the quality of the cement would be improved if inorganic constituents were present also (*H. G. Smith*)."

No cement is apparently used throughout the Wellesley Island group.

14. Cements, etc., of Animal Origin.—Bees' wax is prepared for use by roasting it in the rough over the fire, squeezing it a few times between the hands, and then alternately warming and hammering it. It is employed for sticking articles on the hair, fixing it up in thorns, for mending fibre-twine, cracks in water-carriers, etc. Another use for it is as a vehicle for fixing pigments on the digging-sticks of the Pennefather River women. NGG. andóri.

Along the Pennefather and neighbouring districts, human blood is put to a similar use with the pigments on the mens' weapons and implements: in the far western areas, *e.g.*, Boulia, upper Georgina River, it is this which is employed for sticking the feather-down on the body for decorative purposes.

15. Cements, etc., of Mineral Origin.—A whitish clay was used by the Brisbane aborigines in the early days for mending cracks in the water-carriers, etc. When first dug out of the ground, this material is said to be more or less pliable, but after working up with the hands, it soon becomes quite hard, especially if water gets to it. Thus, on one particular occasion when T. Petrie was out near Bribie Island with the blacks in a leaky boat, the cracks were all plugged with this material, the pieces of which could ultimately only be removed with hammer and chisel, so hard had they become.

16. The Smoothing-board, the analogue of the European putty-knife, is a flat elongate thin piece of iron-wood, etc., with rounded angles (Fig. 21), occasionally almost an oval, 5 or 6 inches long, and just wide enough to be conveniently held in the hand. Employed only by men for smoothing over and levelling the heated gum-cement fixing the twine or tendon over the mortice (between shaft and barb) of the spears, it often carries traces, sometimes even a blob, of the sticky substance. When in use, it is held in the right hand, while the left one does the twirling (*see* Pennefather tooth-scraper, sect. 30), and is always greased with fore-head perspiration before use. The implement is met with on the Bloomfield and Endeavour Rivers, along Princess Charlotte Bay, on the Palmer and Mitchell Rivers, and the lower Gulf-coast. The Endeavour River natives call it jo-ranga, the Cape Bedford ones dorunggor, and the Gunanni blacks mála-alarara. The Princess Charlotte Bay natives, in addition, use another form of the implement, differing from the type in that its shorter margins are straight and finely serrated for the purpose of combing out a certain vegetable fibre during the course of its manufacture into twine (Fig. 22). On the Endeavour River and elsewhere I have often seen a small piece of pandanus leaf, face-greased in similar fashion, doing duty for a smoothing-board when the latter is not to hand.

17. Pigments may be discussed according as they are white, red, yellow, or black:—

White.—(1) "Kaolin," "pipe-clay," hydrous silicate of alumina, met with on the Keppels (where the islanders spoke of it as tarkuli), on the Palmer (KMI. charba), on the Embley, Batavia, and Pennefather Rivers (NGG. aró-a), at Cape Bedford and Cooktown (KYI. garmai), at the Bloomfield, and on the Wellesley (Mornington and Forsyth) Islands. The Cooktown and Bloomfield natives eat it as a food and as a medicine. As a pigment, it may be used as found, without any special preparation (Palmer, Pennefather Rivers), or else prepared by powdering it up fine by hammering between stones, mixing with water, and drying in the sun (Palmer River, Cape Bedford). (2) Carbonate of lime and magnesia: found at Cape Bedford, and called by the same term as the kaolin. (3) "Gypsum," sulphate of lime. Met with throughout the far Western areas. Burnt, and subsequently immersed in a comparatively small quantity of water, so as to make a viscid mass, which dries hard. (PPT. parts, but known to the settlers generally as "ko-pai.")

On the Pennefather and elsewhere a greyish mud (NGG. mbrú-i) may be employed when white pigment is scarce. The minggüna of the Gunanni is a white pigment, bartered from the Coen district.

Red.—(1) Oxides of Iron. (a) Haematite, obtained with an addition of burnt ferruginous clay on the Palmer, where the Kokominni call it norda. Also along the Georgina and Boulia districts. It is again met with at Bathurst Head, and is most probably the material with which the paintings on Clack Island are mainly depicted. It requires no special preparation before use. (b) Burnt ferruginous sandstone. Found on the McIvor River, used without special preparation, and called wo-ba by the Cape Bedford natives. (c) Red oxide of iron (NGG. po-to). Probably obtained by burning yellow ochre, which is found at the surface along the Pennefather River. (d) Ochre, ferruginous clay with sand. From the Batavia and Pennefather Rivers (NGG. adéatalimi). (e) Red ochre, ferric oxide mixed with clay; Bentinck Island. (f) Siliceous red ochre, ferric oxide; Mornington Island. (2) "Cinnabar," sulphide of mercury, was used by the old-time Brisbane blacks (*T. Petrie*).

There is a red pigment from the Batavia known to the Pennefather River natives as trallabotha, but I have not succeeded in obtaining specimens of it for identification. So, again, the Gunanni have a red pigment, maréla, which is said to be burnt preparatory for use.

Yellow.—(1) Limonite, hydrous oxide of iron. From the Keppel Islands, Pennefather River, etc. The natives at the latter locality call it parna, and use it direct. (2) Ochre, clay, and sand. On the Pennefather and at Bathurst Head. The Pennefather blacks call it parna, like the limonite, and roast it, during which process it becomes red, this red pigment being now known as arú-imberi. (3) Yellow

ochre, with a little fine sand. Met with in the more northern districts, whence, in the course of trade and barter, it is brought to the McIvor River and Cape Bedford, where it is known as barga. It is said to be dug up from under the salt pans, and dried in the sun. (4) According to T. Petrie, amongst the now defunct Brisbane blacks, there was a certain toadstool, purgunpallam, invariably found growing near a big ants' nest, which supplied a source of yellow pigment: it was just rubbed on the body, etc., in the dry.

Though not in itself a pigment, the yellow strips of the *Dendrobium bigibbum*, Lindl. (obtained from the inner bark after roasting), which are wound round wommera-handles, fire-sticks, etc., on the Batavia, Pennefather, and other rivers, may be included here.

Black.—(1) Charcoal is used everywhere. (2) Pyrolusite (oxide of manganese) is employed on the Upper Georgina and Rankin Rivers.

18. Media for fixing Pigments.—Occasionally, pigments are painted on in the dry, but if any media are required, those which are nearest to hand are, as might be expected, those most commonly used, i.e., spittle and water. An individual may thus take one or other of these pigments in his mouth, chew it, and spit it over the object, himself, or his friend, to make a spotted pattern. On the Pennefather River, as well as elsewhere in that district, pigments may be fixed with gum-cement, derived from the *Leptospermum* (sect. 13), human blood (especially on the men's weapons and implements), or honey (in the case of the women's digging-sticks). At the Bloomfield, it is the *Aleurites* (sect. 13) which provides the oil used for fixing the ochre in spear-painting. On the shields, etc., from the Tully River and Cardwell human blood is utilised not only as a paint but also for fixing certain of the pigments. In the Boulia and other western areas, snake- and iguana-fat are very common fixing media.

19. Stains, Dyes.—On the Bloomfield, etc., the colouring matter from the roots of the "blood-root," *Hæmodorum coccineum*, R. Br., is used for dyeing the string for the manufacture of certain of the dilly-bags. In the Pennefather River and neighbouring districts, the roots of the *Morinda reticulata*, Benth. (NGG. adā-a), are scraped into water, making of it a thick yellowish fluid with which the women's apron-belts are stained. Throughout the same area, the *Alphitonia excelsa*, Reissek, the "Mountain Ash," "Red Ash," "Leather-Jacket" or "Cooper's Wood," is utilised as follows:—The outer bark, after being scraped off, is rubbed between the hands, and mixed with water: the mixture is then rubbed on the lighter-coloured spear-throwers, which are left to dry in the sun, whereby they become stained a reddish-brown colour.

20. Uses of the Colours.—White is essentially the colour of mourning, sorrow, and tribulation, and is met with during the ceremonies connected with burial, at certain of the initiations, etc. In the Boulia and neighbouring areas, however, it is a "fighting" colour. Red is *par excellence* the colour of envy, hatred, and malice, of force, and energy, visible (fire) and invisible (spirits, etc.): a man's colour, and, hence, observable in the personal decorations of the warriors on their fighting expeditions and on their fighting implements: at corroborees, on their fire-sticks (decorated with the pretty *Abrus* berries): in connection with certain of their charms and articles of magic. The Bloomfield natives, by the exposure of anything red, can ward off impending danger from those particular spirits, etc., whom they reckon as friends. The only occasions on which red is observed in connection with mourning and death has been on the Batavia, Pennefather, and Embley Rivers, with their corresponding hinterland: the subjective sensations under such circumstances are indicated by a red flower or feather fixed to the forelock. T. Petrie states that amongst the Brisbane blacks, red pigment was used by old men and women as a sign of mourning. At Cape Grafton, in the early days of settlement, one of the two exogamous classes was distinguished by its being associated with everything red, the other being similarly intimately connected with everything white. Yellow is the colour for withstanding heat, an entire covering of yellow pigment being used for the purpose in the height of summer along the Northern districts: this practice, however, must not be confounded with the similarly coloured covering for mimicking ant-hills when out hunting for kangaroo. Yellow is rather, perhaps, a woman's than a man's colour. Black is employed not so much as a colour but for out-lining and finishing-off designs, both on weapons and their own bodies: only on one occasion, at one of the higher initiation ceremonies, at Princess Charlotte Bay, have I seen individuals entirely covered with it, but as they were supposed to represent crows there may have been special reasons for it. Blue is not met with as a pigment, etc., anywhere in North Queensland, though "washing-blue" has been introduced here and there by trade and barter from natives employed at the settlements.

21. Colour-sense.—Although possessing no general term expressive of colour in the abstract, the aboriginal is able to appreciate primary colour-distinctions accurately. At Cape Bedford, the Koko-yimidir speaking natives evidently recognise the following:—White, in the sense of colour, is bilbin, dingga: in the sense of light, clear, etc., especially in the case of water, kandal: as a particular pigment, garmai. Red, in the sense of a colour, is dini, and is also expressed as woba-dir *lit.* with the "woba" (a red pigment): in the latter case, the colour is still associated with the pigment, much in the same way as we speak of the terms "raddle" and "raddled." Yellow is barga, the name of the particular pigment. Blue is dalon: the natives speak of purai-dalon, i.e., water-blue, to distinguish deep from shallow water. There is no name for green, the existence of which colour is certainly recognised, but has not been dissociated from the objects, e.g., grass, leaves, with which it is ordinarily connected. Grey, although recognised, is appreciated only in the term for grey-hair (pinga) as distinguished from the normal black-hair (moari). Chestnut is yetchel, but applied to animals only. Auburn, in connection with the hair, either artificially produced amongst themselves by the use of lime, or met with naturally amongst Europeans, is moaringalan, i.e., hair-sun: we possess a corresponding simile in our expression of "sunny ringlets." Black in the sense of a colour, is muni.

On the Tully River, of the three main pigments employed by the Mallanpara, it is interesting to note that the terms signifying them are independent of the colour sensations to which they give rise: thus oba-oba and konggo, marchila, kalmoro, are red, white, and yellow pigments as distinguishable from bumbara, dangkal, karan-karan, their respective colours. Any blue colour is chibul-chibul, while black, brown, and green colours are known as ko-chu.

The Koko-olikulo blacks along Alice Creek, and the Kundara around Mantana, Staaten River, speak of brown, black, blue, and green under the one name of olupuno and kutoram respectively.

Amongst tribes (other than those at Cape Bedford and on the Tully, etc.), where the media of communication are necessarily imperfect, I have found it impossible in most cases to be absolutely certain that the colour is distinguishable from its corresponding pigment, and I, therefore, at present purposely refrain from publishing the names so obtained: it is a matter for research to which I propose reverting on some future occasion. My method of inquiry was naturally somewhat primitive. A small note-book, into which the principal elementary colour papers are pasted on separate pages, is shown to the savage page by page, and he is asked, "What name?" each is. This arrangement, notwithstanding its disadvantages, was found less liable to error in comparison with the means adopted for dealing with more civilised peoples. For instance, when coloured wools were shown him, it was subsequently discovered that the aboriginal had supplied me with names indicative of various twines, animal and vegetable: when the brown colour of his skin was pointed at, he gave the name of the integument, etc.: when I put before him a red berry or seed, he favoured me with the name—so far as he could recognise it or any similarity—of the plant. The various coloured papers pasted into a book are objects comparatively novel to him, and certainly assist in dissociating in his mind the sense of a particular colour from the particular pigment or other concrete object with which it is usually connected. Out of perhaps 200 savages, examined on the above lines, I have not come across any cases where red was indistinguishable from green, or yellow from blue.

22. Stone-work. Flaking.—The only stone-work which is practised within the Queensland borders is that connected with the manufacture of native-gouge heads (sect. 27), knife-blades (sect. 32), spear-heads (sect. 24), scrapers (sect. 26), hand-picks (sect. 35), and, until less than seven years ago, drills (sect. 40). There are still to be found in different portions of the State other implements, *e.g.*, stone-hammers (sect. 37), in the making of which a stone in its natural form is employed, but in no sense can it in such cases be said to be "worked."

The process of flaking native-gouge heads, knife-blades, and scrapers, which I have witnessed during the course of the last ten years, among the Workai-a, Yaro-inga, Walukara, and Wonkajara natives of the upper Georgina waters, at Camooweal, Urandangie, Carandotta, and Glenormiston respectively, may be described as follows:—The "hammer-stone," used for striking off the flakes, is a natural form, and consequently of varying size and shape—anything with a fairly good rounded prominence for striking (Figs. 23, 28)—and is discarded after use. The particular material of which it is composed may be identical or not with the rock about to be struck: Figs. 37, 37*a*, represent a pebble which I saw employed at Glenormiston in the manufacture of the implements illustrated in Figs. 39*a*, *b*, and Figs. 40 *a*, *b*, *c*, *d*. Of late years, this hammer-stone may be here and there replaced by the top end of the back of an iron tomahawk-head. Held firmly in the right hand it is made to strike sharply in a direction fairly behind the vertical onto the "core" or "nucleus," *i.e.*, the stone from which the flakes are to be removed, resting in the left hand (Fig. 23). The core is of andesite, quartzite, or chert, is loosely fixed by the digits in the left palm dropped more or less backwards, and is thus provided, when struck, with a certain amount of resiliency. This method of holding it allows of the surface, about to be struck, being conveniently held at the necessary angle: another advantage is that the flake which is removed, as will shortly be described, from its under-surface is prevented falling to the ground, and so becoming accidentally fractured. The cores upon which I have watched operations taking place vary from 2 to 7 or 8 inches in length, of proportionate bulk, and naturally of every variety of shape (Figs. 30 to 36). Amongst necessary essentials for good flaking is that the particular area of core to be struck must be comparatively flat, and held in such manner that it is at an acute angle with the line of direction in which the blow falls: in cases where its natural contour does not allow of its being maintained in the hand at the requisite angle, it may be deliberately broken by indiscriminate tapping until the object in view is obtained. On examining the bases of the completed native-gouge heads, knife-blades, or spear-heads, they will all bear evidence of this weathered, water-worn, or artificially-fractured, comparatively-flat "slope-surface" (*ss*, Figs. 25, 27, 46*a*, 68, 70); it is this peculiarity, due of course to the angle at which they have been struck, that prevents them being made to stand upright on a table. Another important point is that the special portion of core to be properly struck must be along its lower edge so that, provided the blow be successful, a flake becomes separated from its under-surface, and thus comes to lie in the palm of the hand (Fig. 24), the line of cleavage being apparently at a comparatively open angle with the line of striking. Should the margin of the core's lower edge become too fine and attenuated, it is just trimmed with a light tap or two from above. The most vital factor of all perhaps is that the core must be perfectly dry: if removed, for instance, from out of the moist bank of a creek, etc., it has to be dried well for a day or so, before use. The fact of the flakes being usually removed successively from the one, the lower, surface, may account for the comparative rarity of a "central" core (Figs. 32, 33). As to the causes limiting the shape of the flakes—the short stumpy ones, or "pot-lids" for making native-gouge heads, scrapers, etc., on the one hand, and the comparatively long thin ones, or "lancets" for knife-blades, spear-heads, etc., on the other—it is impossible for me to state anything definite: nor could the natives render themselves sufficiently intelligible, even supposing they know, to enlighten me. At any rate, I have seen both shapes derived from one and the same piece of stone (Figs. 47 to 53): again, a piece of physically similar material may give rise to no flakes at all, dry or wet, but just break up, on striking, into irregularly shaped pieces. The Camooweal blacks maintain that pebbles from the neighbouring Nowranie Creek provide the best native-gouge heads, while the stones lying along the bed of the Georgina River here (as compared with those found on the Gregory River, at Lawn Hills, etc.), are too short and too full of flaws to manufacture good knife-blades from. It was at Camooweal that, during the course of one afternoon, four of the old men must have struck off in my presence quite 300 flakes before a passably suitable one for a good knife was obtained. A large majority of the flakes and chips so produced could of course have been utilised for future use as scrapers, etc. (sect. 26). The stone employed for flaking from is known as ku-ya, kambo, apputa, and poringo to the Pitta-Pitta (Boulia), Mairakudi (Cloncurry), Yaro-inga (Headingley, Lake Nash), and Workai-a (Camooweal, etc.), natives respectively.

23. "Pot-lid" Flakes.—Let us consider that, in response to a smart blow, a comparatively short stumpy flake, a "pot-lid," has been removed, and is now lying on the artificer's palm. If the basal extremity of its upper (last-removed) surface be carefully examined, there will be seen a convex prominence in the form of a semicircle, limited circumferentially by some very fine concentric linear markings to which more or less definite striæ will occasionally be observed radiating from a centre situated on the extreme edge of the slope-surface already referred to: this semicircular convex prominence is known as the "bulb of percussion" (Fig. 25 *bp*). The more complete and more distinctly marked this bulb, the better: because upon it depends in large measure the applicability of the flake for the purposes intended, in that it assists in the separation of the bulbous from the non-bulbous portion during the course of its subsequent manufacture into a native-gouge head, and lends strength to the implement when completed. The bulb-end of the flake, of course, always constitutes the butt-end of the finished article. The flake may happen to be the first of the series struck, its under surface in such a case being a portion of the natural face of the rock or stone: otherwise, its under surface will, of course, show a more or less concave area or areas (Figs. 38 *a* to *h*), owing to the cleavage of the convex upper surface, or surfaces, of the flake or flakes previously removed. The next process in the manufacture is to remove the bulbous from the non-bulbous portion of the flake. Should the thinness of the distal extremity admit of so doing, this may be broken off by resting its edge on a suitable stone, and, by means of another, carefully tapping bit off by bit: otherwise, it is removed by striking, without any support from underneath. So soon, however, as the neighbourhood of the external limits of the bulb is reached, extra precautions have to be taken to prevent untoward splitting of the stone. With this object in view, the base of the flake is held between the left fore-finger and thumb (Fig. 26), its free edge being carefully flaked by gently striking it from above with a comparatively small and light hammer-stone, in a direction similar to that which has already been described as being essential, *i.e.*, at an acute angle, with the surface to be struck. In longitudinal median section, for instance, the action and its result may be illustrated diagrammatically in Fig. 27, where *ss* = slope-surface, *cv* and *cc* = upper convex (last-removed), and lower concave (previously-removed) surfaces respectively, *db* = direction of the blow, *b* = area on which the blow is struck, and *lc* = line of cleavage as its result. Again, although the general shape of the flake—so far as the contour of its future cutting margin is concerned—may be satisfactory, it is possible that its base may be too thick, a defect which is remedied by holding it between the thumb and ball of the little finger, and flaking away (Fig. 28) as before from the lower edge of the slope-surface. As might be expected, the future cutting margin of such a flake at this stage, has a comparatively thick and serrated edge (Figs. 39, *a* to *h*). This is next improved upon by firmly enclosing its major portion, base downwards, and at an acute angle, into a blob of gum-cement (sect. 13) at the extremity of a piece of wood, usually a curved native-gouge handle, holding it in the left hand (Figs. 29, *a*, *b*), and then flaking off all irregularities and prominences by sharply striking them with the flat under-surface of one of the heavier kinds of boomerang, great care being taken that the blows fall along the requisite lines and axes, and that a commencement is made at the sides, not at the centre, of the flake. Where the timber of the boomerang available is not considered hard enough, the flat side of an iron tomahawk-head may be brought into requisition. It may be important to note that nowhere in connection with North Queensland stonework have I observed any such thing as chipping the edges fine by means of steady pressure. When completed, as above (Figs. 40, *a* to *d*), the "pot-lid" is utilised as the head of a native-gouge (Figs. 101, 108), or is attached to the base of a leaf-shaped wommera (Fig. 107). The Workai-a name for a pot-lid flake is lamma, to distinguish it from the lancet flake or walka: the Yaro-inga blacks similarly distinguish them as ilbilla and angwardija.

24. "Lancet" Flakes.—We will imagine now that the original piece of stone, upon being struck in the orthodox fashion, gives rise to a comparatively long and thin flake, a lancet (Figs. 35*a*, 36*a*): two must at least be removed before one suitable for a proper knife-blade can possibly be obtained. It has already been stated that some hundreds may have to be struck, and stone after stone broken, without a suitable one resulting. The two main desiderata for such a weapon (Fig. 132) are length combined with thinness, and a main ridge running to the extreme apex. Now, provided that a good core has been met with, its under surface would give an appearance represented in Fig. 35, where the three facets show the cleavage whence three flakes have been removed, after striking at the proper angle, etc., on the lower edge of the slope-surface: the upper surface of the flake last removed is shown in Fig. 35*a*. The straighter and longer the lines of junction of the facets—for descriptive purposes, these lines are called "ridges"—the straighter and longer will be the flake, which may possibly next be procured. Here, however, the special skill of the artificer comes into play: namely, to strike with such nicety just on the lower margin of the surface-slope between the angle of junction of any two facets that a lancet is produced with the ridge preserved to its very tip. Each of these knife-blade flakes thus presents on the upper, last-removed, surface, a single facet (Figs. 35*a*, 36*a*), and, on the lower, at least two main facets (Fig. 132), divided by a main ridge: its transverse section is, of course, under these circumstances, triangular, and the thinner the flake, the sharper will be the cutting edge. The main ridge is either simple (Figs. 132, 135), or composite (Figs. 136, 137, 138), but these are readily seen to be features dependent upon the number of flakes which have been removed previously or subsequently to the cleavage of the blade from the core. Exceptionally for knife-blades, there may be two main ridges, independent of one another (Figs. 139, 140), in which case there will be three main facets, and, according to the length of the ridges, an abrupt (Fig. 140) or pointed (Fig. 139) extremity: to produce such a flake, three flakes at least must have been previously removed. The stone represented in Fig. 141 is interesting as showing a peculiar "pit" across the ridge, due to the falling of a blow upon the flake before it was mounted, the mounting being carried down just so far that the tool should not be weakened: this shows that stone available for good lancet-flakes was not very common at the local place of manufacture, for inasmuch as hundreds, nay thousands, could be made in a day, it would not be worth while to utilise a faulty one if the stone for making another was available, an inference which is also borne out by the fact that this piece of chert is full of flaws. Sometimes, the flake comes from the outside of the core (Fig. 137), so that one edge may show the weathered surface. Another thing that requires notice in all these single-ridge knife-blades is that only such flakes are selected that possess the main ridge preserved to the very tip, so as to ensure strength as well as sharpness. This may also account for the edges being left untrimmed, an untrimmed one being always sharper. Where the edge is therefore trimmed, there is probably good reason for it. For instance, in the flake, mounted as represented in Fig. 139, one edge of it is trimmed, and shows considerable signs of use: it

is possible that the untrimmed edge has been purposely blunted at the back near the base, so as not to damage the top of the finger when projected beyond the handle-mounting. On the other hand, the usual method of holding these lancet-flakes when mounted as knives (sect. 32) is to grasp the handle with the blade down, the operator cutting towards himself. Fig. 136 shows a similar trimming for protection of the fore-finger, in this case undoubtedly for the purpose indicated, because it is one of those smaller knives, with handle held between thumb and middle-finger, employed for incision, where delicacy of touch is so essential. The source of supply of these lancet-flakes for knives, and the trade routes which they follow, are discussed elsewhere (sect. 32).

Spear-heads (Figs. 41 to 46), which are manufactured along the ranges up the western border north from Lawn Hill, etc., are worked, according to the information supplied me by the blacks, on practically identical lines as the stone-knives, save that they are thicker and longer, and often trimmed at their sides: the smaller flakes may be retained and mounted as knives. Figs. 47 to 53 represent splinters, chips, etc., which I obtained from one and the same quarry where knife- or spear-blades had once been manufactured. Figs. 54 *a, b, c, d*, illustrate similar unused chips. Spear-heads are flaked from quartzite or andesite, and are to be met with, for purposes of barter, made up into small bundles rolled up in tea-tree bark: they may measure up to over 7½ inches in length.

25. Stone-Celts.—I am afraid that too much importance has been hitherto attached to the differentiation of stone-celts into axes, adzes, wedges, scrapers, etc.: the savage most certainly does not recognise the fine distinctions embodied on the labels attached to these articles in an ethnological museum. In the absence of actual observation, is any one competent, for instance, to give a definite opinion as to which of such implements the special use of any stone-celt under consideration most particularly conforms to? Like the "reversible" adze of New Guinea, the wedge-shaped celt of the Batavia and Pennesfather Rivers was used both as an axe, *e.g.*, for cutting into trees, and as an adze, *e.g.*, for hollowing out the body of a canoe, the handle in the latter case being unfastened and refixed at right angles to its previous axis (Figs. 56, 57): the aboriginal evidence of this reversibility for special purposes is enhanced by the fact of iron axe-heads, used at Mapoon (Batavia River), at the present time, being made to serve this dual purpose dependent upon their angle of fixation to a handle. Only two years ago the superintendent in charge of this station, while engaged in some fencing, unearthed such a celt mounted as an adze. On the Endeavour River, Captain Cook says, "The only tools that we saw among them are an adze, wretchedly made of stone, some small pieces of the same substance in the form of a wedge, etc." In the Tully River district, the natives undoubtedly used their axes as wedges (*E. Brooke*), while throughout the whole Brisbane area, the evidence is equally positive (*T. Petrie*) that in splitting timber, the old-time blacks never employed stones at all, but only wooden wedges (sect. 2). The celt figured in Fig. 58 is simply a convenient-sized sub-angular rock fragment, scarcely water-worn, but somewhat weathered: in the absence of any evidence to the contrary, it may have been utilised as a wedge, even, perhaps, as an axe or adze, while the grinding may have arisen by using the tool as a scraper, the stone having originally been quite "un-worked." We are thus faced with a series of objects that may, at one time or another, have been put to at least four different uses. The phrase "stone-tomahawk" seems for the most part to have been a popular Australian misnomer, since it implied that these celts—even if their use as axes be taken for granted—were employed mounted, an implication which was certainly not always necessarily the case. Aboriginal evidence also points to the conclusion that these celts were not fighting implements, but articles utilised for purposes of domestic use, especially in the way of cutting timber, either in the log or tree, and particularly in the cutting of notches or toe-holes in climbing. Furthermore, to name any of the larger kinds of celt, for want of a better term "ceremonial-stones" is, in my opinion, only to beg the question. It also seems to me too much of an assumption to suppose that the definitive uses of such a specialised implement as an axe, adze, chisel, wedge, etc., are, as a matter of course, known to the savage by intuition. About nine years ago, a dugong-fishery station was for some months established on Bentinck Island, and on its closure, an ordinary iron adze-head was either stolen or left behind: about six years after, and again a twelvemonth later, I found this implement in one of the local camps, apparently well cared for, but not a mark or chip on its edge to indicate that it had ever been utilised.

From the organised system of barter along trade-routes defined since times immemorial, the skill, patience, delicacy of manipulation, and other qualities requisite for producing a completed celt, do not necessarily possess any claims on the local aboriginals in whose vicinity the stone under review may happen to be found. To take an extreme case, Fig. 61 is a type of celt well known in neolithic Europe, and of which Mr. Skertchley, late Assistant Government Geologist, Queensland, gives the following description:—"A very beautiful, fine-grained, deep-green-banded, quartzite, which might be mistaken for nephrite or jade. I have found a somewhat similar celt of the same stone in a tumulus at Edenham, Lincs., England, and have seen many broken as this is, and thought they were purposely broken when deposited with the dead. I do not suggest this with regard to the implement under consideration, for it has evidently broken owing to a natural flaw near the butt end, and this before it had been much used. It is made from a natural pebble, slightly trimmed by chipping, and not by flaking: afterwards, laboriously ground down by movements in all conceivable directions, with a true artistic feeling for symmetry and balance, an attempt having been made to secure bilateral symmetry (Fig. 61*a*) in spite of the somewhat awkward shape of the original stone. . . . The stone I could match in Queensland in several places, but the art-feeling exhibited is above the cult of the Australian native so far as I know him: it is allied to that of the adjacent Papuan or the more remote Polynesian and Maori. It is probably the result of barter, not necessarily direct, but handed on from tribe to tribe: such barter goes far deeper than we suspect. . . ." On the other hand, Mr. Etheridge, Curator of the Australian Museum, Sydney, considers this specimen "unquestionably Australian: celts finished with similar art-feeling, and more so, are found throughout New South Wales." Yet, this very celt was picked up on Glengallan (Central Queensland) some thirty-three years ago by a blackboy in the service of the station-owner, who was then, for the first time, taking up that portion of country, and whose wife subsequently gave it to me. At the same time, I readily admit the existence of one or two types of celt more or less limited to special localities: thus, the large, oval, slab-like, double-edged, centrally-grooved implement (Fig. 62) is almost characteristic of the Herberton Ranges, while the small, square, wedge-shaped celt (Figs. 63, 64) appears to be peculiar to the Peninsula.

[With regard to the former type (Fig. 62), Mr. R. Etheridge says:—"So far as my researches have gone, celts of this description do seem to be more or less restricted to local areas. For instance, they are met with along a zone between the Lachlan River to beyond the Darling River: I have figured one from Lake Cudgellico (Proc. Linn. Soc. New South Wales, 1893, VIII. (2), pl. XII., f. 1, pl. XIII., f. 1): I have also figured a Queensland form (*Loc. cit.* 1891, VI. (2), pl. XXXI., f. 3 and 4). They are occasionally met with in Eastern New South Wales, as at Cape Hawke (*Loc. cit.* 1891, VI. (2), pl. XI., f. 1 and 2). Again, grooved celts occur locally around Warnambool and other centres in South West Victoria: Smyth figured one ("Aborigines of Victoria," 1878, I., p. 369, f. 183; p. 372, f. 195)."]

Where celts have been manufactured from water-worn pebbles, and these apparently constitute the majority of examples discoverable (as is also the case, according to Mr. Etheridge, in New South Wales), it seems to me futile to base any rational classification upon the shape: the savage, other things equal, will certainly not give himself the extra labour of altering the general contour of such a stone beyond that involved in producing a cutting edge. Fig. 65, for instance, has been formed from a flattish oval water-worn boulder, selected from its being approximately of the desired shape, and so requiring a minimum of work to fashion it: Figs. 66 and 67 are other examples of this. From a systematic point of view, neither does the material of construction prove of much value, rocks of similar origin undergoing not only varying methods of manufacture, but developing alterations of contour upon completion. Amongst rocks in Queensland giving rise to celts may be mentioned diorite, basalt, argillyte, and serpentine: I know of a specimen, found in Victoria Park, Brisbane, which, most exceptionally for any tool, is made of volcanic tufa.

The actual manufacture of a celt is now a lost art in Queensland, though the statements of some of the older natives and a careful examination of specimens combine to throw a certain amount of light on the process adopted. The original celt in its simplest form is a water-worn pebble or boulder, an adaptation of a natural form (Figs. 65, 66, 67): otherwise, it is a portion removed from a rock, etc., *in situ*, either by fire, indiscriminate breakage, or flaking. The employment of fire for such a purpose has thus, on the authority of Kalkadun natives (occupying the ranges N.W. of Cloncurry) been explained to me: after lighting a large fire for some considerable time either upon or up against the rock from which the celt is to be obtained, it is suddenly extinguished with water, the ashes, etc., removed, and the stone found to be broken and split. On the other hand, I can find no European evidence confirmatory of such a procedure. Where indiscriminately broken from the surface of the rock, the weathered external surface can be recognised in Figs. 68*a*, 69: in the latter example, the flat side shows no trace of further workmanship save on the edges. In thus hewing off the roughness of the original block as well as in the flaking of the edges, it is possible that the stone-hammers, as used up to the present day (sect. 37) may have been brought into requisition. That the celt used sometimes to be actually manufactured from a large flake, as I have been informed by reliable Georgina River natives, is proved to be the case in that here and there such an implement shows the "bulb of percussion" (sect. 23) and "slope-surface" (sect. 22) in excellent preservation (Figs. 68, 70). When once the general contour has been obtained, the required cutting edge was gradually acquired by grinding in all directions. So far, I have not come across any concave rubbing-stones obtained from North Queensland either during my field-work, or in collections, though my Carandotta aboriginal informants state that the harder kinds of fissile sandstone, similar to that used for meal-stones at the present day (sect. 45) was formerly employed for the purpose in their district. In South Queensland, however, at North Pine, about 20 miles from Brisbane, Mr. T. Petrie has pointed out to me in the river there a rock upon which, below water-level, the blacks used to grind their celts. As already mentioned, the motion of grinding was sometimes in all directions, the final touches roughly following the contour of the edge: the process, however, might only be carried as far as the smoothing-stage, the scratchings being quite clear, although the material might admit of a high polish (Fig. 71). The cutting-edge varied anywhere between straight and curved (Figs. 63, 69): it certainly was not necessarily central (Figs. 58*a*, 65*a*), neither was it limited to one end only of the implement (Fig. 62). A celt may show grinding, without any chipping or flaking (Figs. 66, 67, 71, 77): if flaked, but showing no grinding, it will be incomplete (Fig. 72). From what my native Boulia friends told me, I learn that a whole day would prove sufficient for hewing a boulder roughly into shape, while longer periods would be occupied in grinding the necessary cutting-edge, a tedious process, sometimes said to be the work of the women. Quarries whence these celts were originally obtained are none too common: there is one close to Bora Creek on the Bower Bird Gold Field (Upper Leichhardt River), another at Rocky Creek, south of the Staaten River, this side of Wambi's selection, while others are said to be at Mount Elsie, about 100 miles south of Charters Towers, on Molle Island, in the Whitsunday Passage, and at Culture Creek, or Happy Valley, about 7 miles from the Proserpine, etc.

In the far western and northern districts generally, mounted celts were certainly used, the handle consisting of a lath, bent at its middle so as to form two limbs, the stone being fixed with twine and bees' wax or cement-substance into the bend so formed. In these areas, from which specimens are still extant (Fig. 74), the two limbs were bound into close apposition by twine, etc., firmly tied close below the celt, as well as at the proximal extremity of the handle: (*See* similar fixation in the case of the stone-hammer, Fig. 151.) [*See* Etheridge's figures of this form of mounting in Proc. Linn. Soc. New South Wales, 1891, VI. (2), pl. XXXIII. (Thornborough, Q.), and pl. XXXIV. (Herbert Gorge, Q.)] There is no evidence to show that the celt, in Queensland, was ever fixed into the fork of a stick. In the Peninsula, judging from models (Figs. 56, 57), manufactured by older natives from the Batavia and Embley Rivers, the lath, made from the *Coelospermum reticulatum*, Benth. (NGG. pre) and "served" with fibre-strand, was tied in close proximity to the stone only, with the result that the "legs" were crossed: when, therefore, these divergent limbs were grasped, there was not only an increase of springiness in the handle, but, owing to the position of the fulcrum, also a tightening-up of the celt very much after the style of a modern pincers. Models similarly obtained as far south as Herberton and Atherton show that the handles were evidently sometimes made on the same principle. The grooving of the celts from these latter and adjoining districts, *e.g.*, the Herbert (Figs. 62, 75, 76) necessarily bear inference to the original existence of a haft. In those cases where the groove extends right round the celt, and the latter is wedge-shaped, or anything but slab-like, there may be grounds for considering that such implements

were used both as axes and adzes, by a readjustment of the handle as already described from the Batavia: it is impossible to believe that the extra labour of making the grooving complete would ever have been entailed unless there was good reason for it. From Captain Cook's observation of "some small pieces of the same substance in the form of a wedge"—an extract already referred to—it seems to me highly probable that on the Endeavour River, celts were used both with and without handles. I have obtained similar evidence from the old Bowen blacks, as well as from the Brisbane ones (on the authority of Mr. T. Petrie) that celts were employed both mounted and unmounted. On the other hand, at the Keppel Islands, the late Mr. W. T. Wyndham, who was the first European resident there, told me that he saw celts used, but that they were never mounted. In those celts, without a groove of course, where the base or butt is markedly larger than the front (Fig. 59), the inference is that such stones were used unmounted: otherwise, owing to the method of fixation of the handle, we should have to imagine a condition of things where, with any extra heavy blow, the stone would always be tending to slip backwards out of the haft. Inference, as borne out by general contour and finish, may thus often afford a clue towards elucidating the methods of use and objects for which any of these celts may have been originally employed: at the same time it must always be remembered that there is no evidence now to prove whether the inference is right or wrong. For instance, it is possible that the implement illustrated in Fig. 60 may, on the above basis only, have been used hafted as an adze. The Boulia and Glenormiston people speak of the handle as *chiri* or *warchama*: they call the celt, as well as the whole implement, *wallangara* or *mar-ia*. In other districts, the following are some of the local names for a stone celt:—(KYI, C. Bd.) *nambal* = any and every stone, large or small: (KYE) *jangkawabi*: (KUN) *wandang*: (KRA) *ngo-mun*: (KWA) *ai-mu-an*: (KUG) *balku*: (NGI) *moi-in*: (head of Alice Creek, Koko-olkulo tribe) *arnung*: (MAL) *wukara*: (Nicholson River) *nikana*: (Camooweal) *kolo-o*: (Rockhampton) *baluin*, *be-nganu*: (Keppel Island) *batiur*: (Miriam Vale) *willinara*: (Gladstone) *mo-gim*.

26. Scrapers.—This term is used advisedly in a general sense to include a number of implements which, according to the more or less interchangeable uses that we know they are put, are known as *spoke-shaves*, *gravers*, *adzes*, *gouges*, *chisels*, *scrapers*, *knives*. The material of construction is either stone, shell, or tooth, and the implement is invariably drawn towards the operator.

Stone.—The more primitive form of scraper is a small piece of stone, which has been recently indiscriminately broken so as to form a sharp edge: if this adjunct is not forthcoming as a result of the fracture, it may be artificially produced by chipping, as in the variety met with on the Palmer (Fig. 78) and in the Peninsula (Figs. 79, 80, 81). Throughout the far western areas, on the other hand, scrapers made of the actual *chips* or *splinters* obtained in the process of flaking, even of the flakes or cores themselves, are to be found strewn about the discarded camps, or sometimes even carried in the dilly-bags, though pieces of broken-bottle glass are now rapidly replacing them. This second variety of scraper may have portions of its edges trimmed (Figs. 82, 83, 86, 92, 93) according to the particular purpose—cutting, scraping, etc.—to which it is applied: the trimming may be on one or both faces of the edge, and examples are to be found where, from signs of weathering, etc., it is evident that a trimmed scraper of previous times (Fig. 94) has been re-trimmed in previous ones. Figs. 96 to 100 show scrapers with a trimmed concave edge (*tc*) for sharpening the tips of the wooden spears: Fig. 100 represents an implement with two of such trimmed concave edges. The amount of trimming varies greatly: Fig. 82 illustrates a medium case, and Fig. 86 an extreme one. So far as general shape is concerned, these scrapers may be roughly divided into acicular (Figs. 85, 86, 87), polygonal (Figs. 92, 93, 96, 97, 98, 100), and oval (Figs. 82, 83, 84, 89, 90, 94, 95, 99): it will be easily understood that many of these scrapers are used as knives (sect. 32).

27. Throughout the far western areas there is a specialised form of scraper fixed into one or both ends of a curved wooden handle, constituting an implement known as the "native-chisel," "native-adze," or preferably as the "*native-gouge*" (Fig. 101). This scraper is a pot-lid (sect. 23) showing a smooth convex surface, due to natural cleavage, and an uneven concave one, in that the face of the latter has been flaked so as to form a single edge: the major portion of it (Figs. 102, 103) is attached to its handle with Triodia, sometimes perhaps Grevillea, cement (sect. 13), care being taken that the wood does not actually touch the stone (Fig. 104). The handle consists of a curved piece of wood up to 21 inches in length, thick in proportion, circular or elliptical in section, and generally cut out of "*gidyea*" (*Acacia homalophylla*, A. Cunn.). According to the size and shape of its pot-lid, the implement is a cutting, shaving, or scooping tool, and is responsible for the fluting found on the "koolamons" (sect. 62), and on some of the spears, boomerangs, and nullas, for the handle-marks on the two latter weapons, for sharpening the tips of the spears, but especially for the excavation of the wooden troughs. In the latter case the larger variety of native-gouge is rather for "cutting in the rough," the smaller more for "finishing off": it is used on the charred timber with one or both hands moving (Fig. 105) towards the operator. As far as my investigations have led me, this completed implement never formed an article of exchange or barter: on the other hand, there was always a traffic going on with the "pot-lids" in the prepared state, *i.e.*, ready for fixation, one of my most fortunate "finds" being a small line of these which I intercepted and bought at Camooweal on their way down the Georgina. In recent years one or both of the scrapers have been substituted by a portion of disused shear-blade, barrel band, or other form of iron ground down and rounded off to the required shape, and with this modification, when met with at all, the implement is most commonly now found: in these cases, however, it is noteworthy that the iron blade, unlike that employed on the Wellesleys, Gulf, and Eastern coast-line (sect. 31) is fixed by splicing, and strengthened with twine and cement-substance (Fig. 106). The Kalkadun, Cloncurry, and Boulia blacks speak of the whole implement as *kumpata*, the Glenormiston ones call it *pakka-ngi*, the Yaro-inga natives (of Camooweal and Urandangie) speak of the larger varieties as *ilbilla* (the local name for any pot-lid flake), and of the smaller kinds as *jorjera*: the Lawn Hill name is *gobija*. Other districts in North Queensland where the implement has been observed are in the Rockhampton and Dawson areas, but the handle here is straight and tapering (Fig. 108), made of "*brigalow*" (*Acacia harpophylla*, F. v. M.), or "*rose-wood*" (*Acacia*, sp.), and having a considerable portion of its length covered with bark, etc., under a coating of black cement-substance, to form a handle: two scrapers are never attached to the one handle. The Keppel Islanders used to speak of this tool as *yellam* (W. T. Wyndham): the Tarumbal

natives of Rookhampton called the scraper itself ba-lo, and the whole implement iram, or kundolo, the latter term signifying an emu, the leg-bone of which, subsequently replaced by wood, is said to have originally constituted a handle. [Dawson (*Australian Aborigines*) says that in old times the tibia of a kangaroo was used: there is an authenticated specimen of this in the Australian Museum, Sydney.] I have every reason to doubt the locality of Cape York ascribed to one of these implements, labelled E. 150, in the Brisbane Museum collection, no "pot-lid" scrapers having, so far, been met with by me anywhere throughout the Peninsula. Along the Georgina River and especially to the west of it, a similar specialised form of scraper is attached to the base of the handle-end of the leaf-shaped spear-thrower, so as to make a native-gouge of it (Fig. 107) for sharpening up the wooden spear-tip.

28. *Shell*.—The same remarks applied to any recently-broken piece of stone being used as a scraper (sect. 26) hold equally good in the case of chips from any strong and convenient shell. Thus, pieces of *Donax australis*, Lamarck, were used under the name of "babba" by the Keppel Islanders as scrapers, while a similar use was found for the broken shell of the *Pedinogyra Cuminghamii*, Gray, at Miriam Vale (*Ch. Hedley*), for the *Melo diadema*, Lamarck, on Bentinck Island (Wellesley group), and for the *Cyrena Jukesii*, Deshayes, throughout the entire north-eastern sea-board and Gulf-coast. A *Donax*, *Cyrena*, or even a *Mytilus* valve may also be used as a scraper in its entirety, *i.e.*, without breaking or chipping, its lip or margin being sufficiently strong.

[In the old Brisbane days, Mr. T. Petrie tells me that the blacks used to take a *Donax* valve, make a hole in its centre, hold it with concave side inwards in the palm of the hand, and pressing the upper edge of the artificial aperture against the spear-tip, scrape bit by bit away—the chips as they were formed passing through the aperture in the shell—until the weapon was sharpened enough (Fig. 109).]

29. The snail-shell slicer, or kajiri, the Tully River name for the mollusc as well as for the completed implement, is peculiar to the district and neighbouring islands, and requires further notice. It is manufactured as follows:—An empty shell of the *Xanthomelon pachystyla*, Pfeiffer, is stuffed firmly with grass, etc., and ground on the body-whorl behind the aperture (Fig. 110) over the sharp edge of a piece of stone (Fig. 111). The grinding process is aided with a little water, and soon this particular portion of the shell becomes so thin that it can be split across with the thumb-nail. When once this cut has been made, the whole top or "spire" of the shell is removed by cracking it on a stone around the periphery, with the result that there is obtained a remnant, represented in Fig. 112 from below, and in Fig. 113 from above: in addition to the cracking on the stone, this removal is also assisted by a sharp tapping on it, and sometimes even by biting it between the teeth. The remnant consists of the reflected aperture intact, together with the base of the shell. To put it to use, it is held with the base up, in the right hand, by means of the thumb, middle and ring-fingers, the fore-finger being free (Fig. 114). The top of the thumb rests on the centre of the base, while its extreme tip meets and presses on the tip of the middle-finger, passing through the "aperture" from underneath (Fig. 115): the top of the ring-finger pressing into the concavity on the under-surface gives the whole implement more stability. The blade of this slicer is thus constituted by the ground-down and broken edge behind the "aperture," with the result that, as each slice of the particular nut, *e.g.*, *Castanospermum australe*, A. Cunn. ("Moreton Bay Chestnut," or "Bean Tree"), *Cycas media*, R. Br. ("Nut Palm"), is removed by the cutting edge pressing downwards, the separated portion passes upwards between the thumb and shell-lip. In other words, this snail-shell implement acts exactly like a spoke-shave, the thinness or thickness of each slice (for subsequent preparation by soaking in water) being determined at will.

30. *Tooth*.—The kangaroo-tooth scraper (Figs. 116, 117, 118), of the Batavia, Pennefather, and Embley Rivers, of the MacDonnell, Moreton, and Mein Districts, *i.e.*, of practically the whole Northern Peninsula, is in the form of a flat leaf-and-stalk shaped piece of "ironwood": one side of the "leaf" is generally rough, either left so or made so with gum-cement, the other smooth, the tooth being attached to the "stalk" on the latter side. The tooth (NGG. mbau-u), a kangaroo's lower incisor, is fixed with gut, or fibre-twine, and cement: its tip has been previously put into the edge of a flame and broken off abruptly by well-directed and graduated pressure, so as to give a sharp cutting-edge to the enamel. The implement (NGG forma) is employed for sharpening spear-tips, and, in some spears, for cutting the groove into which the barb is fixed. For this purpose, the tool is held as in Fig. 119, the blob of "gum" usually found on the rough side helping to prevent its slipping along the palm. The chipping, or rather scraping, is, of course, made in a direction towards the operator. The smooth surface of the body or leaf of the implement, greased with face-perspiration, etc., is employed as a "smoothing-board" (sect. 16): this use of it is represented in Fig. 120, when the right hand is held fixed, the left one doing the twirling.

In the same districts where the above kind of scraper is found, half the lower jaw of the kangaroo, with tooth *in situ* (Figs. 121, 122), is employed for similar purposes without any further manipulation other than the preparation of the incisor by fire and pressure: it forms a staple article of barter, and is known as no-ana on the Pennefather River. [Mr. Etheridge tells me that an identical implement is used in the Collingwood Bay District of Eastern British New Guinea.] It is possible that the "forma" is thus fashioned after a natural form.

The opossum-tooth graver of the Charters Towers, Boulia, and whole north-western districts, is similarly made of an opossum's half lower-jaw, with tooth identically prepared, but wedged into the split extremity of a small stick (Fig. 123), and bound with tendon. [An exactly similar implement is figured by Smyth as used by the Yarra tribe, around Melbourne, in the old days ("Aborigines of Victoria," 1878, I., p. 349, f. 164).] It is used mainly for the graving of the boomerangs, and occasionally for the special and fine fluting met with on extra good spears or nullas: in its manipulation, the movement is always towards the operator.

31. *Iron*.—As might have been expected, with the advance of European settlement, scrap-iron filed or ground down is rapidly replacing stone for scrapers. Thus, on the Palmer, in the hinterland of Princess Charlotte Bay, etc., a piece of iron from barrel-hoop or spade so treated is used for sharpening spear-tips, and has special names applied to it, *e.g.*, KLA. la'linu, KRA. telmemuka, KWA. kánina. The handle here is interesting in that it is composed of two flat pieces of wood, with the blade in between, the whole tied round with twine, and covered with cement-substance (Figs. 124, 125, 126).

On the Eastern and Gulf coasts as well as on the Wellesley Islands (certainly Mornington and Forsyth), the iron may be wedged into the split extremity of a straight wooden handle. Such larger-sized implements (Fig. 127) are certainly used as scooping tools for hollowing out canoes (Endeavour River, Bloomfield River), and "koolamons" (Mitchell River), as well as for scrapers; they are generally gripped with both hands, like the native-gouge (Fig. 105). The iron utilised may be anything from a piece of barrel-hoop to a ground-down rasp, the sides of the split being tightened with twine and cement-substance. The Gunanni call these large wedge-iron scrapers (up to a total length of 25 inches) *baralge-mbina*. In the Wellesley group, as well as on the neighbouring mainland, there are similar implements (Figs. 128, 129), but of comparatively small size (the handle may be up to 9½ inches), and worked with the one hand only, the hand-grip alone tightening the split into which the blade is wedged. The Mornington Islanders call such a smaller weapon, as a whole, *beram-beram*, after the local term for iron, and the stone, which the latter has replaced, *riambi*: they speak of the handle as *wenba*. This method of fixing an iron blade into the split extremity of a handle is met with only in the Peninsula, along both its coast lines and on the Gulf islands; reliable natives have assured me that the iron has replaced a stone of former times. That this was indeed the case is rendered highly probable from the fact that the present-day stone spear-heads of the Gulf coast, in the neighbourhood of Burketown, Point Parker, etc., are fixed into the shafts by similar means (Fig. 130). The fixation of the stone in the Keppel Island drill (sect. 40) is also of comparative interest. On the whole, I am inclined to the opinion that the iron scraper, with blade wedged into the handle, should be regarded as a remnant of Papuan influences, *i.e.*, a retrograde New Guinea adze, rather than as a stage in the development of the native-gouge (sect. 27) with its stone scraper fixed by cement, or its modern iron blade fixed by splicing.

Amongst aborigines out of reach of European settlement, even sometimes amongst civilised ones, an ordinary pocket-knife or table-knife is employed rather as a scraper (Fig. 131) than as a cutting instrument.

[Mr. Etheridge figures a piece of a wheel-tire mounted as a celt or hammer, from North Queensland (Proc. Linn. Soc. New South Wales, 1891, VI. (2), pl. XXXV.), and a portion of a horse-shoe from the Walsh River, Queensland, as a kind of pick (*Loc. cit.*, pl. XXXVI.). There are several specimens of these horse-shoe picks in the School of Arts Museum, Cooktown, the majority of them from the Palmer. The late Hon. W. H. Browne, one of the early miners on this field, assured me that the reasons given by the blacks for spearing the horses was solely in order to gain possession of the iron shoes.]

32. Knives, Saws.—Stone.—The stone knife in its primitive form is a piece of flaked quartzite or chert, made as required, and discarded after use, as, for instance, in the removal of an emu- or kangaroo-skin: some such implements are represented in the figures illustrative of sect. 26.

The stone knife for permanent use, as an article of trade and barter, is manufactured as follows:—The necessary flake having been finally obtained by the process already described (sect. 24), its base is fixed into a blob of cement-substance, usually *Triodia* or *Grevillea* (sect. 13), which is either rounded and smoothed nicely off to fit the hollow of the hand (Fig. 132), or else lengthened by the addition of a piece of wood (Figs. 135, 141). The knife is primarily a fighting implement, for jagging into the adversary's shoulder, buttocks, etc., but is also used for incising generally. Along with the implement there is generally a sort of sheath (Fig. 134), made of longitudinally-placed strips of "tea-tree" bark wound round and round with opossum twine, covered more or less with "kopai" (sect. 17), and enclosing at its apex some emu- or other feathers, which, projecting inwards, protect the flake-point. This flake, however, is gradually becoming replaced by iron obtained from disused shear-blades, barrel-hoops, etc.: the handle is also undergoing modifications, a fairly common form being its encasement in the testicle-pouch removed from sheep, goat, or kangaroo. The stone from which the flake is manufactured is obtainable along the heads of the Burke and Wills Rivers, the country around Lawn Hills, along the head-waters of the Georgina as well as the ranges west (Toko) and east (Selwyn) of this stream, but not on the Mulligan. From the upper Georgina and Selwyn Ranges, the completed knife travels, for purposes of exchange and barter:—(a) across to the Cloncurry and upper Flinders River, (b) to the middle Diamantina River *via* Noranside, Boulia, and Marion Downs, or *via* Springvale, (c) to the upper Diamantina River *via* Kynuna. In addition to this home-manufactured article of these North-Western districts, there is undoubtedly a large import of these knives taking place from the Northern Territory, across the border from Wollongorang southwards: the handles of these latter are more or less decorated with red, white, and black pigments in the form of a spotted pattern. In the Boulia district, the handle of the implement is spoken of as *kanti-marō* (*i.e.*, cement-possessor), and the sheath as *muntabilla*: the weapon as a whole is known by the same name as the blade—PPT. *ku-ya*, MIT. *kanggari*, KAL. *wo-yen*, etc. Descriptions of some of these knife-blades are given in sect. 24.

33. Shell.—The edge of the valve of the *Cyrena Jukesii*, Deshayes, may be used for cutting bark, etc., on both the Eastern and Gulf coasts, including the Wellesley Islands, and for splitting the distal extremity of the wommera (for fixation of the peg) on the Batavia and Pennefather Rivers. In the Moreton Bay district, the valve of the *Donax* was applied to similar purposes (*T. Petrie*). On the Keppel Islands, the hair used to be cut off by a sort of sawing movement with the sharp edge produced by splitting a "cuttle-shell" vertically down its centre. At Cape Grafton, the shell of *Perna Cumingi*, Reeve (KUG. *weta*), has its edge ground down for slicing up certain nuts preparatory to cooking. Only up in the Peninsula, on the Pennefather River, have I seen the whole valve of any shell fixed into a handle: this is the implement (NGG. *tchui*) used for making the body-scars, before glass came into use. The shell thus employed is that of *Tellina pharaoensis*, Hanley (NGG. *bóranganama*) fixed into the split extremity of a small wooden pencil, with its anterior cutting end projecting (Fig. 142): occasionally, two valves, not in natural apposition, are fixed similarly in the one extremity of a handle: the alleged reason for having two shells attached was, that if one were to get broken during the course of the operation, the other would be available, and so prevent the "patient" making any valid protest for postponing the rest of the agony to some future opportunity.

34. Tooth, etc.—The tooth-knife is made of an elongate ironwood lath with a slot on one side, into the distal half of which some eight or nine sharks' teeth are fixed with gum-cement (Fig. 143). There is generally also some similar cement on both tip and butt, the latter having a looped twine attached to it. When a man proposes attacking with this weapon, he hides it from his adversary's view, either in his left arm-pit, or hangs it by the loop from over his forehead, so as to lie behind his neck: at suitably close quarters, the blade is suddenly brought to the front, seized by the butt-end, and made to hack the victim's flank or buttock. I have noticed these weapons up to 8 or 9 inches in length. The first I met with was on the Palmer, whence it had been obtained from the Kundara natives, at the mouth of the Mitchell, who called it *kulkong*: the Koko-minni blacks speak of it as *alng-wa*, the term in both cases indicating a tooth. It was said to be used as a knife for the "hacking" purpose already described, and never for sawing meat. The Gunanni speak of it as *kappatora*.

[A similar implement was in use at King George Sound, W.A. (P. B. King: "Intertropical and West Coasts of Australia," 1839, II., p. 139: also, *see* Smyth, "Aborigines of Victoria," 1878, I., p. 341, f. 151). Mr. Etheridge has also figured a specimen without locality in which the teeth are those of the shark *Carcharias lamia*, Risso. ("Records Australian Museum," 1902, IV., No. 5, p. 207, pl. XXXVI).]

On the Tully River I have already reported (Bulletin No. 3, Food, etc.: sect. 12) the use of the lawyer-cane as a cross-cut saw for getting certain edible grubs out of soft and rotten timber.

35. Hand-picks.—The picks or oyster-stones of Bentinck, Mornington, and Forsyth Island, in the Wellesley group, are formed of pieces of quartzite ("billy"), jasper, or quartzite with jasper in part, chipped fairly carefully to a point, but the actual manufacture of which was not observed. They are more or less pyramidal, measuring up to 5½ inches long, and wide in proportion (Figs. 144 to 149), clasped firmly at the butt for removing the oysters from off the rocks, their method of action being very similar to that of a pick. On Mornington and Forsyth they are known as *riambi*, the same name applied to the stone which the islanders told me has since been replaced by the blade of the iron scrapers (sect. 31). [In connection with these picks on Bentinck Island, where they were first discovered, it may be mentioned that, although no punk was seen associated, I originally suggested that, whatever else they might be, they acted the part of flints in raising fire: they certainly gave rise to a spark when struck. Colour was lent to the suggestion by the fact that on each of my visits here, all the members of my party carefully examined the camps for fire-sticks, but with a negative result, and I am still puzzled to know how these islanders make fire. The timidity of the Bentinck natives is such that only on one occasion, during the course of three visits, have I been able to come into direct touch with them. They neither communicate with the mainland and neighbouring islands, nor speak the same language as the Mornington and Forsyth blacks, which has been identified: in fact, they appear to have been isolated from the outside world long prior to the time when the present inhabitants first occupied the neighbouring islands of the group.]

36. Pounders.—The "nardoo-stone" (Fig. 150) of the Boulia and upper Georgina districts is a rolled sandstone boulder, employed primarily, as its name implies, for pounding and breaking the hard shells of the "nardoo" (*Marsilea Drummondii*, Braun): its edges are more or less trimmed by the continued pounding, so as to produce an oval implement with flattened upper and under surfaces, just big enough to be clutched firmly with one hand. By the Pitta-Pitta tribe at Boulia, this stone is called *murra-tuno* (*cf.* *murra* = hand, *tau-e* = to strike): at Glenorniston and Roxburg it is named *porri* (= rock, stone). In other areas the pounder may be replaced by any basalt, diorite, etc., boulder-pebble conveniently to hand, or by special mallets and hammers. In the Rockhampton district, and on the Keppels, it would almost seem that pounders were used in pairs, like mill-stones: the upper one was an oval flattened pebble, the lower, of irregular shape and varying size, usually presenting a slightly hollowed surface. The Rockhampton (Tarumbal) blacks, certainly distinguished these by name—*kundala* for the pounding, and *ke-wal* or *karain* for the pounded, stone—but never carried them about when shifting camp: they just planted them, when not in use, up in the fork of a tree. Besides being used for seeds and nuts, pounders may be employed for breaking up pigments.

37. Hammers—Stone.—The head of the stone-hammer is made, without any signs of flaking—certainly not of grinding—from a sub-angular pebble, the worn face often indicating the work that has been done with it. The pebble is fixed into its handle on identical lines as a celt when used for an axe, fixation being similarly secured by means of fibre-twine and cement (Figs. 151, 152, 153, 154). It is employed for tapping on the bark when the sheet is being removed (sect. 1) and for breaking open some of the harder nuts, *e.g.*, *pandanus*: in the former case, its hammering helps to loosen the bark from the subjacent tissues after the limiting incisions have been made. I found the implement in use throughout the Princess Charlotte Bay hinterland, in 1898, and again on the Palmer, in the course of the following year. I have already suggested that these implements may have been utilised in the manufacture of stone-celts (sect. 25). Local names are KWA. *ambianga*, KRA. *ngo-mon*, KLA. *wu-ru*, KMI. *no-ra*.

38. Wood (Mallets and Anvils).—On the Pennefather, Batavia, and Embley Rivers, both hammer and anvil (NGG. *ko* and *ko-ri* respectively) are in use: they are made of "iron-wood," and the hammers are up to 16½ inches long. There is no distinction between head and handle in the mallets (Fig. 155), the one passing almost imperceptibly into the other: the extremities are irregularly truncated. The anvil is a more or less rectangular block of wood, flat and elongate (Fig. 156), measuring up to 10½ inches long. Another very primitive type of implement (Figs. 157, 158, 159) is met with on Bentinck Island, in the form of a mucronate-pointed stick up to 2 feet in length: it is cut from a small limb of mangrove, the bark removed, both ends sharply pointed, and may be uniformly covered with red pigment. Beyond the natural tapering of the limb itself, there is no differentiation between head and handle. It is used for hammering, digging, and perhaps also for knocking over birds, iguanas, etc. Evidence of the use of these implements for hammering or pounding was afforded in the presence of adherent particles of vegetable fibre and *débris*, the polished nature of some of the handles, certain of which bore handle-marks in the form of shell-cuts, and the accompanying miniature-log anvils (Fig. 160), on which the worn surface showed where they had been repeatedly struck: it is quite possible that the anvils had once been hammers. That these same sticks were also employed for digging was shown by similar reasoning strengthened by

the fact that though several heaps of underground roots had here and there been gathered ready for preparation, there was nothing whatever met with in the shape of the ordinary spatulate digging-stick of the mainland. On the grounds that I had no actual proofs of their being used as throwing-sticks (nulla-nullas), and that there are no dingoes, kangaroo, wallaby, etc., on the island to throw at, I have purposely refrained from applying that term to them. Considering that the only cutting implement (scraper) on this island is the valve of the Cyrena shell, and that such a hard timber as mangrove would probably not be so peculiarly pointed without adequate reason, I would hazard the opinion that the tips indicate the method whereby the implement has been cut away from the limb of which it once formed a part: to bisect such a limb, for instance, transversely with a shell is impossible, but to scrape all round from above and below with the curved valve until the central attenuated portion is thin enough to be snapped across, is a comparatively easy process (Fig. 161).

On Forsyth and Mornington Islands, where the hammer is called toanam, the flattish oval head is certainly distinct from the handle, though the actual demarcation is incomplete (Figs. 162, 163, 164): it is up to 15 inches long.

In the hinterland of Princess Charlotte Bay the mallet, also made of "iron-wood," bears resemblance to the shape of a cricket bat: an elongate flattish head, and a shorter circular handle with the demarcation complete (Figs. 165, 166). It is similar to the model of the implement made by an aged native in the Atherton scrubs when showing me the old-time method of manufacturing a blanket by hammering a bark-sheet. From 11 to 14 inches long, and of considerable weight, this mallet is employed for breaking up nuts, pounding various food-stuffs, and other articles; it is not made as occasion requires, but is carried amongst the impedimenta from camp to camp. As far as I could learn, it is essentially a woman's implement in this district. KRA. angkúrti-in, KWA. ngau-al, KLA. múlum.

Lower down the coast-line, at Bathurst Head, the shape of the implements, still made of "iron-wood," was observed to be yet further modified: the head was much stumper, and at the same time circular (Fig. 167). One in my possession is about a foot long, and weighs close upon 7 lb. Captain Cook speaks of a wooden mallet as among the few native tools found on the Endeavour River: there is none there now.

Amongst the blacks at the mouth of the Mitchell River, I found a large flat hammer and anvil combined (Fig. 168): it was made of "iron-wood," and measured 17½ inches long.

The two-handled club of the Pennefather, Batavia, and Embley Rivers is now obsolete (Fig. 169). It was made from an aerial root of the "black-mangrove" (*Rhizophora mucronata*, Lam.), a limb being chosen with a fair knee or bend in it, so that when cut away to a length of about 2½ feet, the implement would include the markedly flattened portion beyond it, the latter constituting the head. After removal, it was stripped of its bark, heated throughout over a fire, and finally painted red and white: the convex edge of the enlarged distal portion was the striking surface. The implement was used for breaking up fragments for fire-wood, for removing a tree-limb after it had been hacked round by a celt, and for splintering up the rotten timber which contained the edible grubs. It was called au-nu by the Pennefather River natives.

39. Digging-sticks.—These are essentially womens' implements, carried about by them, and employed for digging up "yams," roots, etc.: the almost universal pattern according to which they are fashioned renders them admirably suited for the purpose. Made of some strong and heavy timber, between 2 and 4 feet long, the attenuated spatulate extremity (Fig. 170) easily finds its way down when stuck into the ground, and not only offers increased leverage in loosening the soil, but also assists in shovelling it to the surface, when the operator exercises the usual to-and-fro movement. To harden the extremity it is often charred with fire. In the neighbourhood of civilisation the spatulate extremity has come to be replaced by a length of rounded scrap-iron, sometimes even a table-knife blade, firmly cemented into a handle. On the Wellesley Islands (other than Bentinck), and very exceptionally elsewhere, the extremity of the implement is acicular (Fig. 171). Similarly, a broken spear-tip may occasionally be utilised as a digging-stick. The timber out of which digging-sticks are made comes from the harder species of mangrove, and eucalypt, and from "iron-wood" where generally available: from the *Acacia Rothii*, Bail. (NGG. lar), and *Unona Wardiana*, Bail. (NGG. niadoa), on the Pennefather River, from the *Scyphiphora hydrophyllacea*, Gaertn. (KYI. yarokal), on the Endeavour River. The handle of the weapon is often to be seen decorated with red and white paint in bands, or one colour alone may just be smeared on indiscriminately: the Pennefather River women fix the pigment on the weapon with bees' wax. The local names for digging-sticks are apparently independent of the timbers employed: NGG. kirtru, KYI. dirm-ba, gana, KYE. Bid. tchu-al, KRA.KMI. an-a, KWA. nggor, PPT. kállara (the name of a "yam"), MIT. tande.

40. Drills.—*Stone.*—I saw the stone-drill used on Big Keppel Island in 1897, for piercing cocoa-nut and turtle-shell in the manufacture of fish-hooks, and learnt that it was also employed for piercing the units of nautilus-shell so as to string them into fore-head circlets. This tool (Fig. 172) was also observed in use in this same island by the late Mr. W. T. Wyndham, the first white resident, in the early eighties. A piece of white quartz was wedged into the split extremity of a piece of grass-tree (*Xanthorrhoea*) peduncle, running up to a length of about 2 feet. In the two specimens I secured, "the stone is of vein-quartz, a natural slab showing its full thickness, and totally unworked: the edges are broken, but not flaked, and there is no definite outline." When in use, the implement is held vertically and twirled between the flats of the hands, pressing downwards—just as in the ordinary form of fire-stick (sect. 7). The Keppel Islanders spoke of the quartz as bú-ren, the fibre tying it round as ren, and the portion of *Xanthorrhoea* peduncle, which gives the name to the implement as a whole, as ralla.

41. Tooth.—The tooth-drill of the Princess Charlotte Bay district is made with an inoisor, from any of the larger species of kangaroo, which is stuck into a short handle, and fixed in position with twine and cement (Fig. 173). The exact method of fixation consists in splitting (with shell) the extremity of the handle into four, by means of two cuts at right-angles, tying a piece of string around some little distance

beyond, to prevent the splits from extending (Fig. 174a), and inserting the base of the tooth in the double wedge so produced (Fig. 174b): the extremity of the handle is next firmly wound round with strong twine, and covered with "iron-wood" cement, while the string beyond, which, of course, is no longer required after once the resin has set, is finally removed. It is with this tool that the holes in the spear-thrower (for fixing the peg) are drilled, as also the holes in the constituent pieces of shell forming the necklaces: it is named after the term indicative of a tooth. On the coast-line between the Mitchell and the Staaten the constituent pieces of the shell necklaces or fore-head circlets used to be pierced with an opossum-tooth drill.

42. Shell.—The shell-drill of the Batavia, Pennefather, and Embley Rivers is manufactured with a sharply-pointed chip broken off from the shell of the *Cyrena Jukesii*, Deshayes. The chip is fixed with fibre and cement substance into the split extremity of a small wooden pencil (Fig. 175). The implement is employed like the other drills for piercing the components of the shell necklaces, etc., and named after the shell utilised, e.g., NGG. onyi.

43. Awls.—The awl is a fairly common implement, met with wherever the spears are manufactured of a distal (tip, shaft), morticed into a proximal (butt, haft), portion: indeed, this is the tool whereby the mortice is effected. It is always of bone, usually from a marsupial or avian leg-bone, from 6 to 12 inches long, and got into shape by chipping and by grinding: its distal extremity varies both in size and shape (Figs. 176, 177, 178, 179), according to the particular work required of it. No handle or cement is affixed. It is carried in the men's dilly-bags. The method of employment for spears as observed on the Pennefather River—a description which holds good for all other districts—may be given here (Fig. 180). Having tied some twine tightly round the proximal portion of the spear, about 4 or 5 inches from its extremity, the operator splits it up with a piece of shell (Fig. 180, a, b), and keeps the wedge open by means of a peg (Fig. 180c). With the help of the awl, the next process is to scrape and pick out the core on either side of the split, so as to leave a circular aperture when the peg and twine are removed (Fig. 180, d, e). [The distal portion of the spear is now fixed in with cement-substance, and the mortice bound round and round either with vegetable-fibre twine or, preferably, kangaroo-tendon, which is fixed in position with more cement, and finally smoothed over with the "smoothing-board." In the case of fish- and a few other spears, where the distal portion is multiple, these separate pieces are morticed as one, but, in order to give "springiness," numerous small wood-shavings, etc., are wedged in between their basal interstices, previously to being permanently bound round.] The extreme butt-end of all the wommera-thrown spears except those made of "bamboo" is covered similarly with twine, etc., and gum-cement (which is retained there) prior to the concavity (NGG. ndó-a) being made by the awl for the reception of the wommera-peg. The awl is here and elsewhere also used in excavating the socket of harpoons (sect. 66) supplementary to charring (not splitting, as in the case of the spears), and on the Pennefather River, etc., for hollowing-out the ear-ring tubes. The implement has special terms applied to it:—KRA. tang, KLA. al-púr, KWA. an-gaina, NGG. rté-uma, KYI. C.Bd. pegur.

44. Stiletto.—I have borrowed this term from the similarly-shaped implement, found in a civilised woman's work-basket, for making eyelet-holes. As met with among the natives (Figs. 181, 182, 183), it is from 6 to 8½ inches long, and made either of bone (kangaroo, wallaby, emu) or of "iron-wood": when of the latter material, it is usually discarded after use. The employment of the bone stiletto has been observed in:—removing the cortical layer from off the *Livistona australis* ("Cabbage-tree") leaf in the manufacture of its twine (Musgrave River); assisting in hollowing-out the ear-ring tubes (Pennefather River); picking off the bark in the manufacture of certain water-carriers (sect. 58) and bark-blankets (Atherton); boring the holes in the wommera for fixing the peg (Endeavour River); for piercing the edges of bark before threading them in the manufacture of canoes (Pennefather and Tully Rivers): for piercing the nasal septum; picking kernels from nuts; and in the early days for piercing the opossum-skins to sew them up into cloaks (Brisbane). The wooden stiletto is similarly used for piercing softer materials, e.g., top-stitching the leaf-scale carriers (sect. 63), or mending any accidental splits. The implement has a special name sometimes applied to it, e.g., KUG. chi-chal. Hedge-hog quills were used as stilettoes for making up opossum-cloaks by the Brisbane blacks (*T. Petrie*).

45. Grinding-Stones.—Where, as in the North-Western districts, grain constitutes the main source of vegetable diet, a special form of grinding- or mealing-stones is met with. Each set consists of a movable stone or rubber, and a fixed slab upon which it is rubbed and pressed. The former is bilaterally convex on its under surface, more or less circular, and anything between 4 and 6 inches in diameter (Fig. 184): it is pressed with both hands backwards and forwards, each change in direction being accompanied with a kind of initial half-circular movement at the wrist. The oval slab, up to 18 inches long, and broad in proportion (Fig. 185) has a more or less irregularly-chipped edge, and almost invariably shows two longitudinal shallow depressions along which the mealing-stone or rubber has been working: the degree of convexity on the under-surface of the latter is, of course, dependent upon the amount of trituration to which it has been exposed in being ground along the depressions. The particular material, a fissile sandstone, from which the slabs are manufactured, is said to be found only (so far as this ethnographical district is concerned) in the country around Walaya (on Pituri Creek, one of the western tributaries of the Georgina) and neighbouring Toko Ranges, where the natives work it into the completed articles which they bring for barter either to Carandotta or to Roxburgh. The exact locality and process of removal from out of the natural rock is said to be a secret among the old men: that the slabs are in some way detached by means of fire and then split with bone pegs. From Carandotta, the slabs get into the possession of the Kalkadun and other tribes living along, and north of, the Leichhardt-Selwyn Ranges. At Roxburgh they start on their journey down the Georgina, branching off *via* Glenormiston for Carlo and the upper Mulligan, or at Herbert Downs for Boulia, whence, *via* Springvale, they may reach the middle Diamantina. It seems almost incredible that some of these large slabs should be traded such immense distances: but then, of course, the women are the beasts of burden, and even when shifting from camp to camp, the slab will be included in the "swag" carried over her back. The rubber is known as weko at Boulia and Roxburgh, as ku-ila in the Leichhardt-Selwyn and Cloncurry districts: the fixed slab is called jara-jara at Boulia.

In the neighbourhood of Normanton I have seen a rubber of shell agglomerate used with an irregularly broken piece of "grey-wacke," a very altered sandstone from the Devonian (Fig. 186). In the upper Peninsula and along the eastern seaboard it is comparatively rare to come across any specialised form of grindstone, a circumstance hardly to be wondered at, considering that, instead of grain, we meet with a vegetable diet composed almost entirely of roots and fruits. There is evidence, however, that some of these coastal natives, amongst whom these articles are no longer met with, used in former times to possess them: the Cape Bedford aboriginals, for instance, speak of the fixed stone as dindi, and of the rubber as mar-ngumai, although they have no examples to show me.

46. Prodder, "Lawyer-feeler."—The prodder consists of a piece of lawyer-cane (*Calamus* sp.) some 10 or 12 feet long (with all its "prickles" removed), upon the extremity of which a bulbous knob of bees' wax has been fixed (Fig. 187). It is inserted into tree- or ground-holes, the cane being naturally well adapted for the purpose, when the waxed tip picks up any opossum- or bandicoot-fur, etc., against which it may be pressed. It thus serves the double purpose of confirming the presence of some particular animal, and accurately gauging its situation in the log or hole, so far as distance is concerned, whereby the labour of cutting away or digging at the right spot is reduced to a minimum. For transport purposes, the implement is bound round into a coil, so as to be slung on the shoulder, and is carried about by men. It is met with in the Princess Charlotte Bay district, and named after the material, e.g., KWA. arú-ya.

To get the grubs of certain moths out of the tree-butts, etc., in the Rockingham Bay district, "The blackfellow is armed with a 'lawyer-feeler,' which can be obtained any length up to 10 feet. The feeler is stripped of all its spikes (prickles) but one—the one is left at the point—and is inserted in the hole made by the grub, and gently pushed down. The pliability of the feeler enables it to follow the bends and turnings of the hole until it reaches the grub, which is known to the blackfellow by the stoppage of the feeler. He then continues pressing and turning the implement for a few moments, and then gently withdraws it to find he has hooked" his prize (*R. A. Johnstone*).

47. Swabs.—For mopping up honey, green-ant "mush" (Bull. No. 3, p. 17), etc., use is made of the *Spinifex hirsutus*, Labill. ("Spring Rolling Grass") or *Panicum semialatum*, R. Br., as follows:—Two or three handfuls of the grass, after removal of the roots, are well rubbed up between the hands, with water sometimes, and then left to dry, forming a small more or less intercoherent bunch. These dried bunches are used throughout North Queensland, where very few intercepted dilly-bags would be found to be without one. They are named after the particular plant: in the case of the *Panicum*, NGG. lo-thi, in the case of the *Spinifex*, KYI. bai-tchin, KMI. awá-ra, KWA. ni-aura, KUN. koradja, etc. At Cape Bedford, other grasses may be used, but the swab in any case is called bai-tchin.

A long withe of the *Malaisia tortuosa*, Blanco ("Crow Ash"), is also employed throughout the North for a similar purpose. Its extremity having been previously well chewed and dried, so as to become frayed (Fig. 188), it is poked up into the tree-hole after a bees' nest, where it collects the honey, is pulled out, and then sucked by the hunter, an operation which can be repeated *ad lib*. On the Pennefather River, a species of bamboo (NGG. ngora), and at Cape Bedford, on the Bloomfield, and around Atherton, the lawyer-cane (*Calamus*), are also similarly employed. Such withes are usually carried from camp to camp, and locally named after the plant, e.g., KYI. wot-yirin, KWA. ko-adam, arí-luar, KRA. dingalka, KLA. ku-la, NGG. kai-inuna.

[The Brisbane blacks used to take a sheet off the inner bark from the underground portions of certain fig-trees, as well as the local "native stinging-tree," and alternately hammer and chew it. This sheet might be as much as 18 by 12 inches, and, acting like a flannel, could easily soak up the honey from a bees' nest: it was then wrung out into water, the sweetening of which was much relished. They also employed the chewed end of the *Calamus* as a swab (*T. Petrie*).]

48. Fly-flicks. Fans.—In most camps, during the hotter months, the wing of some comparatively large bird, such as the "Native-Companion" (*Grus australasianus*, Gld.) or "Plain-Turkey" (*Eupodotis australis*, Gray) is often to be seen employed as a fly-flick, possibly as a fan. At Cape Bedford, on the Palmer, Mitchell, Nassau, and Staaten Rivers, fly-flicks are manufactured with Emu-feathers, somewhat after the fashion of a feather-duster, the quills being bound together onto a short handle, the binding being strengthened with gum-cement (Fig. 189): these are made and used by men, generally the older ones, and known to the Koko-yimidir as wandaka, and to the Koko-minni as ata-angka (feather) or arí-va (emu)-ata-angka. On the Bloomfield, specimens of similar design are made of Cassowary feathers. The Palmer River women employ flicks (KMI. wai-yir) composed of human-hair twine tassels, each formed of a loop twisted upon itself: these tassels are merely bound together at one extremity without any wooden handle. Wherever the deeper kinds of apron-belt are met with, these may be rolled up and similarly used as flicks.

Independently of any of the preceding articles, the nuisance of being pestered with flies is abated by the smoke derived from burning the timber of *Santalum lanceolatum*, R. Br. ("Sandal-wood"), on the Palmer River, or *Xanthorrhæa* stumps at Cape Bedford.

49. Head-Pads.—Head-pads are formed of strips of *Melaleuca* bark bound round into a thick ring (Fig. 190), and placed on the head so as to distribute the weight when anything extra heavy is being carried that way. It was in 1898 that I first saw these articles used—on the upper reaches of Birthday Creek, a stream running into Princess Charlotte Bay. They were subsequently met with, made after the same pattern and material (as well as of grass) at Cape Bedford, in the Palmer camps, and again at the mouths of the Mitchell and Norman Rivers. KMI. oko-ana, KYI. C.Rd. mordi.

50. Netting-Needles.—In the Boulia district, and beyond it on the Georgina, the needle employed in weaving the pituri-bags and other than netting-stitch bags was formerly made from the mid-rib of a Plain-Turkey's wing-feather, with a piece of twine attached to its proximal extremity (Fig. 191): as the twine became used up, another piece was spliced into it, the original attachment of twine to needle, when once made, not being interfered with. Some of the older Glenormiston blacks told me last year that such a needle, the so-called tattí, might also be made out of other birds' wing-feathers.

In manufacturing their fish- and emu-nets, the natives of the North-Western districts use a wooden needle, over a foot long, with a small lump of cement-substance at either end, but with no eye, the twine being just wound off and on as required: the Pitta-Pitta blacks call it a karkanibole. In the Peninsula, along the coast-line between the Mitchell and Staaten Rivers, the Gunanni use a true European-form of netting-needle, the ré-da, for making fish-nets and netting-stitch bags. Such a needle is either composed of two pieces of stick (from some cabbage-tree palm, etc.), tied at a short distance from each extremity (Fig. 192), or of one single piece split at the extremities, with a twine tied round each to prevent the splits enlarging (Fig. 193): the larger kinds, used for larger meshes, may be charred at their extremities for hardness' sake.

[At Brisbane, netting-needles were made of two pieces of wood tied together at their middle, the twine being rolled between the two (*T. Petrie*).]

51. Spindles.—The commonest form of spindle for manufacturing twine is a fine twig with projecting branch cut off short (Fig. 194): there is reason to believe that as such it must be of some particular shrub, etc., not liable to split, or else possessing some other comparatively important property in that, as at Barclay Downs, I have seen several of them tied up in bundles, probably with a view to barter. On other occasions, if such a forked twig is not available, the "hook" may be attached by means of cement-substance (Fig. 195) or fibre-twine (Fig. 196): in the latter case, after tying, it will be noticed that the free end of the twine passes over the fork. In the Boulia district, the spindle is known as mingko, a term applied to the fork of the fingers, toes, or a tree, any forked stick: the Morehead and Musgrave River natives call it nggái-aja.

52. Strainers. Colanders.—These articles (Fig. 197) are made of several straight basal strands (*sb*) interwoven by means of two continuous strands (*cs* i and ii), in the form of a chain-twist, according to the type of basketry described as B (c) on p. 13 of my Bulletin No. 1, "String, etc." The straight basal strands, however, are doubled over a "border-string" (*bs*) attached to two sticks, which are discarded as soon as the straight basal strands are fixed in position by the first row of the chain-twist. This border-string is so-called because it constitutes the border of three out of the four sides of the colander when completed. As a necessary corollary to the article being constructed on the flat, the chain-twist runs alternately zig-zag from side to side. Such a strainer, made of *Livistona* or *Pandanus*, may be over a foot wide, longer in proportion, and stretched across the top of the elongate wooden trough, against the side of which it is clutched by the knees of the woman, who is at the same time briskly rubbing and straining the yam, etc., through the mesh-work into the cavity below (Fig. 198). In those districts where true strainers are not met with, they are replaced by certain of the baskets, which are then spoken of as sieve-baskets or sieve-bags (sect. 54). Amongst the Gunanni, where these true strainers have alone been observed, they are made and used only by women, and are called tarbulanga, a name identical with that applied to their pliable baskets or sieve-bags.

53. Dilly-bags. Baskets.—From a structural point of view, pliable dilly-bags cannot always be distinguished from non-pliable baskets: i.e., the common chain-twist pattern of the latter (the warp and weft) has its exact counterpart in certain fibre-twine bags from the Gulf-coast country between the Mitchell and the Norman. It seems somewhat remarkable that certain bags and baskets are made only by men, and others only by women; particulars of these will be given as they occur. As the type of construction will be frequently referred to, the reader is again advised to consult my Bulletin No. 1, "String, and other Forms of Strand: Etc.," sect. 18, for a classification of North Queensland Bag- and Basketry-Work. In connection with this reference to a former work, it is only right to mention that in the light of more recent investigations, it has been found that the second paragraph of sect. 23 of that Bulletin is incorrect: it ought to read—

The dilly-bags (as well as the other articles in the category) are woven on lines similar to the preceding examples (Plate XI., 1, 2, 3), but with this modification: that operations are commenced with the continuous strand prior to its being attached to the basal strand. Thus, after fixation onto an upright (Pl. XI., 1) the continuous strand is knotted on itself into a number of meshes, the number, of course, depending upon the width of bag or net which it is proposed to manufacture. This continuous strand being removed, a straight basal strand is passed through the top row of meshes (Pl. XI., 2) and tied, as usual, between the two sticks. The meshes already made will thus become stretched in a direction at right angles to that just undergone, the netting process now proceeding from left to right in the ordinary manner (Pl. XI., 3).

and the illustrations referred to in that same section under Pl. XI., 1, 2, 3, should be replaced respectively by Figs. 199, 200, 201, in the present Bulletin. Furthermore, since Bulletin No. 1 was written, two more types of basketry, etc., work have been discovered in the true head-nets of the Boulia District: these recently-discovered types find a place in the table of classification in section 18 of that pamphlet under A (b), as Var. III., "loop and twist" (Fig. 202), and Var. IV., "loop and double-twist" (Fig. 203). Captain Cook gives the following description—the first of its kind—of a bag from the Endeavour River. . . . "They have, however, a small bag, about the size of a moderate cabbage-net, which is made by laying threads loop within loop, somewhat in the manner of knitting used by our ladies to make purses. This bag the man carries loose upon his back by a small string which passes over his head: it generally contains a lump or two of paint and resin, some fish-hooks and lines, a shell or two, out of which hooks are made, a few points of darts, and their usual ornaments." . . . In addition to being employed as articles of transport, dilly-bags and baskets may be utilised as strainers or colanders in the preparation of various nuts and yams, as nets for fish, etc.

54. Variations in Different Districts.—On the Batavia, Pennefather, and Embley Rivers, dilly-bags (NGG. to-to, do-do) are woven on the A (a) ii. and iii. types of pattern, from at least three species of fig, which have been identified as *F. nitida*, Thunb., and *F. orbicularis*, A. Cunn., giving a white twine, and *F. Cunninghamii*, Miq., with a reddish one. The A (a) iii. types are manufactured by the women, but used only by the men: the completed article runs up to a comparatively large size. The baskets, small

(NGG. ndó-re) and large (NGG. mbai), have a local peculiarity in that the mouths are comparatively wide (Fig. 204): they are manufactured all on the B (c) type, from either the *Heleocharis sphacelata*, R. Br., *Hæmodorium coccineum*, R. Br., or *Panicum semialatum*, R. Br. The smaller baskets, with handle-string slung over the shoulder, and held in the armpit, are worn by the males. The larger varieties are utilised by the women, either as colanders or as bags, in the latter case letting them hang down the back from a handle supported across the forehead: they are also often employed as cradles to rock the babies in, by attaching the handle to an overhanging tree-limb. Further down the Gulf-coast, extending from the Mitchell to the Flinders, and stretching right across the Peninsula to the eastern coast-line, dilly-bags are constructed on the A (a) ii., iii., and iv. types, though the geographical distribution of the A (a) ii. appears to be limited within this area to the country north of the Gilbert, and west of the junction of the Mitchell and Palmer Rivers. Women alone make the A (a) ii. and iii. patterns, but use no netting-needle, the finished bag, apparently named after the plant-fibre used, being known to the Gunanni tribe as omba. Women also make the A (a) iv. bags, but with a netting-needle (sect. 50): the Gunanni call the completed article kaljó-ma. The pliable baskets or sieve-bags, the tarbulanga of the same blacks, and made by women on the B (c) type, from Pandanus and Livistona, are met with on the Gulf-coast, between the Mitchell and Staaten, though they are often replaced here by true strainers or colanders (sect. 52).

In the Boulia, upper Georgina, and Camooweal areas, dilly-bags are made from human-hair, *Psoralea patens*, A. Cunn., and other twine on the A (a) I., A (b) I., and B (b) types: the last-mentioned is always met with in the boat-shaped article (Figs. 205, 206) peculiar to the district. The Pitta-Pitta name for these navicular bags is berdaje. I found no traces of baskets in these areas.

Coming now to the eastern portions of the State, in the country bordering around Princess Charlotte Bay, dilly-bags are manufactured from twines derived from *Livistona australis*, Mart. ("Cabbage Tree"), *Acacia latifolia*, Benth., *Malaisia tortuosa*, Blanco ("Crow Ash"), *Sterculia caudata*, Hew. (one of the "Flame trees"), *Macaranga tanarius*, Muell. Arg., and *Ficus fasciculata*, F. v. M., according to types A (a) i., ii., iii., and iv. The reddish twine from *A. latifolia* is either employed wholly in weaving the bag or, especially in the A (a) iii. pattern, may be used alternately with the *Malaisia* or *Sterculia* to produce a horizontally-striped red and white appearance. The completed article has a comparatively great depth. Perhaps the commonest method up here of carrying these dilly-bags is to slip the handle-string over the forehead, the bag hanging behind between the shoulders. Baskets from the *Hæmodorium coccineum* are on the B (c) pattern. It is apparently the women who alone manufacture both baskets and dilly-bags.

On the Palmer River, dilly-bags (KMI. an-óra) are woven on the A (a) iii. and iv. types, the former being known to the Koko-minni blacks as alu-yíra, the latter as nu-ína. The fibre-twine employed is obtained from *Sterculia diversifolia*, G. Don ("Black Kurrajong," or "Victorian Bottle-tree"), *Livistona australis*, Mart. ("Cabbage-tree"), *Acacia leptocarpa*, A. Cunn., and *Acacia lysiphlea*, F. v. M. When made of the A (a) iii. "pattern," the *A. leptocarpa* may be alternated with the *Sterculia* so as to produce a horizontally-striped appearance. The baskets of the type B (c) are made from *Pandanus* sp., *Spinifex hirsutus*, Labill. ("Spring Rolling Grass"), and *Hæmodorium coccineum*, and named, after the plant utilised, anjo-ana, awa-ra, an-to respectively: they are employed almost solely for sieves or colanders.

The Endeavour River and Cape Bedford dilly-bags (KYI. burngga) are made from the *Acacia flavescens*, A. Cunn. (a red twine), and the *Hardenbergia retusa*, Benth., on the A (a) iii. pattern of mesh, either together or separately: in the former case we get the usual horizontally-striped red and white appearance. Baskets, all on the B (c) type, are woven from twine derived from *Hæmodorium coccineum*, *Spinifex hirsutus*, *Imperata arundinacea*, Cyr. ("Blady Grass"), etc., the local name of the last-mentioned (KYI. dirn-bur) giving the name to these articles in general. (In connection with these dilly-bags and baskets from Cape Bedford, I would invite the reader's attention to some items on their terminology in sect. 11 of my Bulletin No. 2, "The Structure of the Koko-yimdir Language.")

The Bloomfield River dilly-bags (KYE. ngon-yan), built on the A (a) iii. type, are made of various *Ficus* (KYE. warur, tchul-bal, etc.) fibre-twines: the baskets or sieve-bags on the B (c) pattern are manufactured from the *Drymophloeum Normanbyi*, F. v. M., when they are known as karkan, the name of the plant itself, or from the *Xerotes multiflora*, R. Br., when they are called bal-ji, a term independent of the material made use of.

In the Cairns, Cardwell, Atherton, etc., districts, the dilly-bags (KUG. balkara) are of the A (a) iii. type. The "bi-cornual," or as they are sometimes locally called, "half-moon," baskets (MAL. chau-an, KUG. bundu, CHI. bokol) also used as sieve-bags in the washing of the *Zamia* and other nuts, are of a shape (Fig. 207) peculiar to these areas, and though utilised by both sexes, are certainly manufactured by men only: they are woven on the B (c) pattern, with strips of *Calamus*. They are sometimes decorated with various pigments, sometimes with blood, but searching enquiry fails to discover any satisfactory interpretation of the designs. Attention is drawn (sect. 59) to their remarkable resemblance in shape to the local bark water-carriers. The round (Fig. 208) baskets (MAL. mindi) are made from the *Xerotes longifolia*, R. Br., on a similar pattern as the preceding, but with a different arrangement in the initial stages, by women only.

The Whitesunday Island dilly-bags are woven on the A (a) i. and A (a) iv. types.

On the coast-line between Gladstone and Broadsound, the dilly-bags, made from the *Sterculia rupestris*, Benth. ("Bottle-tree" or "Gouty-stem tree"), are usually of small size, and woven on the three types A (a) i., iii., and iv.: the two former I saw being manufactured in the North Rockhampton and Yeppoon camps. Baskets are made on the B (a) pattern from a certain grass known to the local Rockhampton natives as kindur, and to the Keppel Islanders as wanda: they are rounded, with bases inclined to be pointed (Fig. 209), and are from a few inches to over a foot high.

[In the Moreton Bay area, dilly-bags, woven with "stinging-tree," "cotton-bush," and other fibres, were worked on the A (a) i. and A (a) iv. patterns. The baskets were made with the *Schænus melanostachyus*, R. Br., on the C (a) and D (a) types; and with the *Xerotes longifolia* on the B (a) type. According to information derived from my friend Mr. Thomas Petrie, both bags and baskets were, in the early days, called dilli by the Turrbal (Brisbane) blacks, and kuli by the Stradbroke Islanders, and each

variety of receptacle had its own special uses. Thus, the *Schænus* basket, manufactured by women alone, was carried only by that sex: it was slung over the back by means of a handle-string attached to opposite edges of the rim [unlike those made for sale at Dunwich at the present day], and supported round the wearer's neck, which was prevented being cut into in front by the opossum-cloak which was put on first. This basket contained the food, and occasionally it held certain bones of people deceased. Similar remarks apply to the A (a) i. type of dilly-bag. The A (a) iv. pattern of bag, on the other hand, was carried about by men under the left arm-pit, with the handle slung over the corresponding shoulder: it might contain one or other or all of the following articles: red pigment, dried skin of deceased friend or relative, fat, magic crystal, kangaroo-bone stiletto (used as a hair-comb), honey-swab. Though manufactured by males, the A (a) iv. type of bag was used by both sexes, especially for carrying crabs and fish, often for soaking various nuts and other food-products: in with the crabs were always placed leafy twigs of the mangrove, which it was believed prevented these crustaceans nipping each other.]

55. Water-carriers, Troughs, "Koolamons," Etc.—Water-carriers may be classified according to their source of origin, whether animal or vegetable: the former include shell-troughs, scoops, and skin-bags, the latter comprise the various vessels manufactured from the bark, timber, leaf, and fruit respectively.

Shell.—The large "Lamp" (*Megalatractus aruanus*, Linn.) and "Melon" (*Melo diadema*, Lamk.) shell is often used as a water-carrier. The latter, on the whole eastern coast-line north of Bowen, has the ventral surface of the last whorl, the spire, and columella chipped away so as to form a basin (Fig. 210). If the shell be fresh, this removal may be effected straight away by means of a sharp piece of hard stone, the line of fracture following the tapping: otherwise—and the same holds good for all shell-work—it is soaked continuously in water for some three or four days previous to being manipulated. The chipped edge may be subsequently ground down with a stone. At the Bloomfield and on the Batavia River the melon shell is also used on the fire for boiling purposes. In the neighbourhood of Whitsunday Island, so much of the ventral surface of the last whorl is removed as will admit of room for the hand to hold the columella as a handle (Fig. 211). From the eastern sea-board it finds its way, by trade and barter, to considerable distances inland: as a carrier, it has no special name other than its own:—KYI. C.Bd. dirakai, KRA. dangara, KLA. wannam, KWA. rthú-anta, NGG. pera. Along the Gulf coast, certainly from the Batavia to as low down as the Mitchell Rivers, as also on the Wellesley Islands, the ventral surface of the last whorl of the melon shell is pierced for insertion of the thumb during transport (Fig. 212). On the Bentinck and Allen Islands, the last whorl of the *Megalatractus* (Fig. 213) was found to be similarly treated.

Oval pieces of *nautilus* and melon shell are often used on the east-coast for spoons (Fig. 214): indeed, on the Bloomfield and at Cape Bedford it is difficult to decide whether these should not rather be classed primarily as ornaments, they being fixed sometimes with wax, sometimes by means of a drilled hole, to a string hanging round the neck. Mussel-shells (*Unio*) without any manipulation (KYI. warboparka), are also commonly utilised as scoops, both in coastal and inland districts. On Mornington Island, a piece chipped from the *Tridacna* (Fig. 215) was apparently used as a cup or saucer for mixing pigment in.

56. Skin.—For the conveyance of water over long distances, skin-bags (Fig. 216) used to be manufactured whenever and wherever this commodity was scarce throughout the far Western districts. What with the far better canvas water-bags and other utensils obtainable from the settlers, their manufacture eastwards of the Georgina River is now comparatively scarce. Made from Kangaroo, Paddymelon, or Opossum, occasionally from Dingo, the skin is cut all the way round, high up in the neck (which ultimately forms the top of the bag), the front-paws and tail removed close to their bases, and the whole skin pulled away, inside out, from the carcase: it is subsequently tanned with "coolibar" gurr. moistened with water. The front-paw and tail-hole openings, together with those of the natural passages, are closed by means of a bone or wooden peg pierced through opposite edges, below which some strong twine or tendon is wound: tears in the skin may also be seen mended with pegs supported by a figure-of-eight knot, reminding one very much of the fixing of a surgeon's hare-lip pin. Finally, the two hind legs are tied together so as to act conjointly like a strap, which may either be slung over a shoulder or carried in the hand. Occasionally for transport, if a large skin, the two front-paws may be left and tied together to the mouth of the bag, and a pole, resting on the bearer's shoulder, passed through both sets of limbs (Fig. 217): sometimes, the initial incision is made below the level of the front-paws instead of around the neck of the animal. The tanned side of the skin is inside. This skin-bag is known as nilpa at Boulia, aggara at Glenormiston, norlo in the Kalkadun country.

57. Bark.—Vessels made out of bark may be conveniently described under certain types—e.g., the knot, pleat, bi-cornual, sewn-canoe, and punt—all of them, with the exception of the first, depending upon differences in the fixation of their extremities:—

The knot-type of carrier (Figs. 218, 219), another good example of a natural form, is made from the gnarled excrescence met with on the butt of certain species of Eucalypts. Such a bulging knot, at suitable season of the year, is hacked around at its base, a pointed stick is used to loosen its edges, and its bark shell thus bodily removed: the roughnesses, etc., within are scooped out by charring with fire and then scraping with shell or stone, while any cracks, splits, or holes are mended with cement-substance. The vessel may be carried about by means of a handle-string passed through holes drilled on opposite sides of its free edge. Comparatively rare nowadays, it has of recent years been met with along the coast-line from the Bloomfield to the northern limits of Princess Charlotte Bay. Judging from eight specimens, the maximum height and width is 15 and 15½ inches respectively. The names applied to this type of carrier are apparently synonymous with the tree from which it is obtained: KWA. rú-an, KLA. wappam, KRA. kuro-on. [Mr. T. Petrie tells me that these vessels were employed by the Brisbane district natives, that they were made by men, used for carrying honey, and called nyugam.]

58. The *pleat*-type of bark trough is made of an oblong sheet of bark folded up at its ends, which are fixed in position either by tying, bracing, looping, or spiking. In the neighbourhood of Cooktown, and on the Flinders group, I have thus seen a length of tea-tree (*Melaleuca*) and on the Tully River and elsewhere another kind of bark, just tied up with string at either end, but without any supporting sling-strap (Fig. 220): Captain Cook, however, on the Endeavour River, speaks of "a kind of oblong vessel made of bark, by the simple contrivance of tying up the two ends with a withy, which, not being cut off, serves for a handle" (cf. Fig. 224). Throughout the Wellesley Islands, the pleated ends of the *Melaleuca* bark are maintained in position by a supporting loop of fibre-strip attached to the top corners of the sides of the vessel: the bow-knot, acting the part of the toggle, on this strip is rove from the outside in whence the fibre passes outside and below the bunched-up ends to be finally rove through the opposite corner from inside out, and tucked under its own part (Figs. 221, 222). The size of these particular Island troughs varies greatly according as the article is required to carry the larger fish-nets and other impedimenta, or to lap up a mouthful or two of water from a native well. The spiked variety of this type (Fig. 223) is met with on the eastern coast-line, from the Bloomfield River to a good distance north of Princess Charlotte Bay, on the Gulf coast from Pera Head to the Batavia, and in the Peninsula, from the Palmer to as far north as the Moreton Telegraph Station. On the Endeavour River, I watched the manufacture of one of these troughs, and found it to be as follows:—A sheet of bark (tea-tree or other), the full size of the tree—so as to curl nicely—is removed, and its outer layer picked and peeled off with a kangaroo-bone stiletto: the two extremities, where the pleating subsequently takes place, are especially thinned and pared down with this implement, and finally warmed over a fire. Two superficial transverse cuts are now made on the inner side at such distance from the extremities as to admit of the folds being bunched up on a common basis: this being done, the ends are again heated and the pleats fixed in position by skewering them through with a curved sharply-pointed "iron-wood" peg. The inner surface of the bark constitutes the inner surface of the vessel. The Endeavour River natives speak of the folded ends as *ngollo*, after the front of the instep which gives rise to wrinkles when the ankle is flexed. On the Embley River, I have seen these spiked utensils supported by a fibre-twined sling-strap (Fig. 224), the terminal loops of which pass under the skewers. Again, on the Batavia and Pennefather Rivers, there may be a handle attached in the form of a stick, placed longitudinally, tied to the two ends of the trough (Fig. 225). [In the *pikki*, a similar carrier that used to be made by the women of the Moreton Bay coastal tribes, Mr. T. Petrie tells me that the handle-stick, a pointed one, was pierced through both ends of the vessel, the stick and bark being then tied together: it was employed for carrying water and honey. Besides making the trough of tea-tree, the women also utilised a palm-leaf sheath-stalk, but when this material was used, the two ends were skewered just below the handle-stick: it was also called a *pikki*, and used for carrying the cobra.] The bark from which the spiked variety of pleat-type trough is manufactured on the east coast is derived from the following timbers: *Eucalyptus phornicia*, F. v. M. (KYI. *ngainggar*) at Cape Bedford, *E. resinifera*, Sm., "Red" or "Forest Mahogany", "Botany Bay Gum," "Jimmy Low," etc. (KMI. *ro-angga*) on the Palmer, *E. corymbosa*, Sm., "Blood-wood" (KYI. *jin-jil*). *E. tetradonta*, F. v. M. (KYI. *tungoi-i*), and *Tristania suaveolens*, Sm., "Bastard Peppermint," "Broad-leaved Water Gum," or "Swamp Mahogany" (KYI. *bu-jir*, *manga-manga*), at Cooktown. In addition to being employed for the transport of water or honey, and for the preparation of various foods, these troughs, though of course on a larger scale, are used for carrying infants and other impedimenta across creeks, by being pushed along in front of the swimmer. Again, the larger-sized ones on the Bloomfield, Endeavour, Palmer, all round Princess Charlotte Bay, and in the Peninsula even north of the Coen, are made for carrying corpses about (Fig. 226) during certain of the burial ceremonies. Local names for these pleat-type carriers are the following: KYE. *Bld tu-bal*, KMI. *jo-ára*, KYI. *C. Bd. gurlnggo*, KRA. *an-dú*, KWA. *kor*, NGG. *anó-a*, GUN. *bo-ata*, and on Mornington Island (Karo-wa dialect) *wor-de*.

59. In the Cairns district, the *bi-cornual* type of carrier (Fig. 227) is manufactured from the inner-bark of the *Calophyllum tomentosum*, Wight, the outer-surface of this inner-bark ultimately constituting the inner surface of the vessel. A suitable length of bark-strip having been secured, it is folded at its middle (Fig. 228*a*), the edges being pared down before they are overlapped and laced, the resulting shape being such that the long axis of the mouth of the vessel is at right angles to its base (Figs. 228*b*, *c*). Owing to the apposition of the two folds along the line of flexure, and the lacing along the sides, the base of the carrier gives rise to two comparatively sharp corners or horns, whence the type-name of this utensil is derived. On the outer edge of the mouth a thin piece of lawyer-cane (*Calamus*) is attached by over-casting with a finer strand of the same material: on the handle-side, evidently to strengthen it, a second piece is fixed just below it in similar manner. Both the lacing and the over-casting are all retained still more firmly in position by smearing over with *Melicope*- or *Panax*-cement (sect. 13) or bees' wax. Handles of lawyer-cane, split, are next fixed close together on one side. These carriers, which are sometimes smeared over with raddle, vary in size up to as much as 21½ inches in height: they are used for water or honey. I cannot help believing but that the shape of these utensils has given rise to the similarly-shaped baskets (sect. 54) which are met with only in the same districts as these bark ones—i.e., Herbert River, Cardwell, Cairns, Atherton, etc. Among local names are the following: KUG. *du-bal*, *tokobil*, NGI. *tokobal*, MAL. *no-bar*, CHI. *nu-pa*.

60. The *sewn-canoe* type. This is a large trough, sewn with lawyer-cane at the two extremities (Fig. 229), made, in fact, on identical lines as the local single-sheet bark canoe, but in miniature, and called by the same name of *kukai*: it is employed in the neighbourhood of the Tully River for washing certain yams in. To describe this particular vessel as of a canoe-type pure and simple would be ambiguous in that two or three varieties of the pleat-type of utensil (sect. 58) are similarly but small editions of canoes used in former times on the Southern Queensland and New South Wales coast-line: I am perforce calling it the *sewn-canoe* type.

61. The *punt* type of carrier (Fig. 230) is constructed on an almost identical pattern as the paper punts or trays of European children, with the addition that, both outside and in, the two smaller sides are supported by means of sticks laced through them with a vine-strip; the folds at the extremities of the

smaller sides may be top-stitched in addition. This kind of trough is as much as four feet and more in length, from 6 to 8 inches deep, and is used for preparing a certain kind of sour yam in. It is met with at Cape Grafton and around Cairns, where it is known as (KUG.) ku-lur, pitar.

62. Wood.—The elongate wooden trough or "koolamon" (Figs. 231, 232, 233) with rounded extremities, is, in the western districts, manufactured out of the same material and in the same localities as the shield, and travels in exchange and barter along identical routes. When made from the *Erythrina*, the local "cork" or "coral" tree, they are split out straight away two (Fig. 234), three, or four at a time, according to the size of the butt, the natural contour of the tree assisting in the final artificial contour of the vessel. Where the timber does not lend itself to splitting, e.g., *Eucalyptus bicolor*, A. Cunn. ("Slaty Gum," "Yellow Box," "Grey Box" or "Bastard-box"), the local "coolibar," a trunk or limb is selected as near as possible to the required shape (Fig. 235), with a slight bend in it, ultimately to become the outer convex surface of the vessel. The suitable length of timber having been removed—split or hacked away, as the case may be—its outer surface is trimmed down into the final shape required. Its concavity is produced by picking, charring (sect. 4), and gouging with a native-gouge (sect. 27): when roughly got into shape it is steeped in water, maybe for some days, then wound round with twine to fix it in its permanent shape, and finally finished off with the gouge. Such wooden troughs are usually coloured red or black, and often show a fine external longitudinal fluting, for ornamental purposes: the irregular longitudinal flutes on the inner surface, indicating the action of the scooping-tool during the course of their manufacture, may either remain or be supplanted by regular ornamental ones. These carriers vary greatly in size from 13 or 14 to over 49 inches in length, and up to 13½ inches wide, are either convex or slightly flat-bottomed, and deep or shallow, with corresponding differences in the angles at which the ends slope towards the centre. These variations are due partly to the natural contour and adaptability of the timber employed, and partly to the uses to which the vessel may be put: these latter include a basin for carrying water, food, or the baby in, a miniature canoe for transporting impedimenta across a stream, a vessel for washing and soaking yams, etc. The koolamon is met with throughout the Western districts and along the Gulf-coast, certainly as far north as the Mitchell River. The larger variety is carried either on the head, or at the side or back of the body, in the latter cases, supported on about the level of the hip by a cord passed over the opposite shoulder, assisted, as often as not, with the wrist and hand underneath: the spilling of the fluid is markedly limited, almost prevented, by laying small twigs of leaves upon its surface. Koolamons are manufactured by men only. Some of the local names of these vessels are the following:—at Carandotta itángo, Camooweal marra, Toko Ranges urtua, Glenormiston palla and un-a, Boulia takka (small variety) and kurdo (big variety) as specialising a kunpara (any koolamon in general), Diamantina Lakes kallapo, Upper Diamantina River wingara (for women) and umbo (for men) Upper Flinders River yanggo, Cloncurry nangkur, Kalkadun-country cherto, and on the coast-line between Mitchell and Staaten Rivers marija-anga.

63. Leaves.—Carriers made of leaves, strictly speaking, from palm-leaf sheath-stalks, are of two varieties according as they are punt- or scoop-shaped. The first is met with amongst the Moreton and Ducie River natives, and is peculiar in that the two smaller folded sides are top-stitched (Fig. 236). The second, derived from the *Drymophloeus Normanbyi*, Benth. and Hook., on the Bloomfield River, from the *Archontophoenix Alexandrae*, Wendl. and Drude., on the Tully, Bloomfield, and at Cape Bedford, is very simply made: a certain length is cut off from the proximal portion of the sheath-stalk, the base of which forms the mouth of the scoop, while the cut end, pleated and tied round with twine, forms the handle. Such scoops (Fig. 237) are met with on the Tully (MAL. ko-pángara, also the name of the plant), Bloomfield (KYE. yu-al), and Endeavour River (KYL. bokol-bokol), at Cape Bedford (KYL. birla), on the Starcke (KYL. kundari), and on the Palmer Rivers. As a temporary substitute for carrying a little water a short distance, I have throughout North Queensland often seen any largish-sized leaf rolled into the shape of a European child's paper sugar-loaf.

64. Fruits.—Gourds used to be employed on the Tully, in the Cairns district, at Cape Bedford (KYL. mai-al), and along the coast-line further north, for carrying water when canoe-ing to the adjacent islands, on several of which no fresh water is to be found. Representations of gourds were discovered among the rock-paintings on Clack Island, near the Flinders group. I am informed that, on the Tully, the gourds used to be stoppered with grass. The plant utilised is the *Lagenaria vulgaris*, Ser.

65. Packages.—Apparently the most primitive form of package is the entire breadth of bark-sheet, from a comparatively small tree, with its free edges overlapping owing to its natural curl: although such a parcel has open ends, a suitably long one, supported by a twine loop from the opposite shoulder, may be slung over the mother's hip to enclose the baby. Another common method, pretty well everywhere adopted for carrying and preserving small articles, especially those which are on transit for purposes of trade and barter, e.g., pigments, stingaree-barbs, is to roll them up in bark, fold over the edges, and wrap the bundle round with twine. Tea-tree appears to be the bark invariably used. Such a package or parcel at Cape Bedford is spoken of as dangara, a term which, with the introduction of civilisation, has since come to be applied to a woman's skirts.

66. Harpoons.—The three parts of a complete barbed harpoon are barbed-head, shaft, and connecting-line. The barbed-head (kuradan of Cape Bedford) is a circular-sectioned piece of wood, gradually tapering from base to tip (Figs. 238, 239, 240), varying in length from 8 to over 14 inches. On the Endeavour River, etc., Captain Cook, in describing the implement, speaks of "a peg of wood [barbed-head] which is about a foot long," and on another occasion, when recording the killing of a turtle, says . . . "upon opening which we found a wooden harpoon or turtle-peg, about as thick as a man's finger, near 15 inches long, and bearded at the end, such as we had seen among the natives, sticking through both shoulders." The wooden barb (danban of Cape Bedford) is single (Fig. 238) or double on the Keppel Islands and adjoining coast-line, as far north as Whitsunday Passage, but single elsewhere: when two barbs are affixed, their position is bilateral and opposite (Fig. 239). The method of fixation of the barb

was usually into a slight longitudinal groove below the point of the head, binding firmly with tendon, and covering with cement-substance: on the other hand, the Batavia River natives attached their bone barb (the only locality, apparently, where this material was used) in such position that the bone constituted the extreme tip of the implement (Fig. 240). Except on the Bloomfield and Endeavour Rivers, and on the Flinders group, the base of the barbed-head is usually coiled around with fibre. The shaft (kokoni of Cape Bedford, where it gives the name to the weapon as a whole) varies from 7 or 8 to as much as 9 or 10 feet in length, is always "held in or hurled from" the hand, and gradually increases in diameter from butt to tip, into the extremity of which a socket (diar at Cape Bedford, pallara at Dunk Island) is picked and drilled. The Keppel Islanders used to excavate this socket with a bone awl: on the Batavia River it was made by blowing upon a glowing cinder so as to char the subjacent timber, removing the cinder, and scraping away the burnt surface, and repeating the process until the required depth is obtained. The butt end of harpoons used between the Bloomfield and Flinders group is somewhat flattened and bored through (Fig. 241) in the form of an elongate aperture (milkal of Cape Bedford). When in use, the base of the barbed-head with its coil of fibre, specially moistened for the purpose, is jammed fairly tightly into the socket. In the districts above mentioned, the coil of fibre may be replaced by one or two wooden pegs, which wedge the barbed-head into position: so also, just above the base there is a ring (yoka at Cape Bedford) of cement-substance (Fig. 242), which not only prevents the head being pushed too far into the socket, but also limits the chances of the attached rope from slipping. The connecting-line, made of *Sterculia quadrifida*, R. Br. (a "kurrajong"), at Cape Bedford, of *Hibiscus tiliaceus*, Linn. ("Cotton-tree"), on the Pennefather, varies in diameter up to $\frac{3}{4}$ -inch, and in length up to fifteen or more fathoms, according to the animal which is to be hunted, a longer one for turtle than for fish. One extremity of this line is tied direct on the base of the barbed-head (Fig. 243), the usual method, but on the coast-line extending from the Bloomfield to the Flinders, it may be fixed into a special loop, attached to the barbed-head by means of a clove-hitch (Figs. 241, 242). The disposition of the remainder of the rope varies. Along the area of coast-line extending from Fitzroy River to Broadsound, it is wound once or twice round the length of the shaft, and then hitched onto the extreme butt, whence it passes to the throwing hand, which supports a few loops of it (Fig. 243): its remaining length is held in the free hand, and finally attached to it or to the canoe. At Whitsunday Island, the rope is hitched onto the shaft forward of midway. On the Tully River the end of the line is attached to the butt of the shaft, its main portion being held in a basket hanging in front from around the thrower's neck (Fig. 244). The thrower will hold a few loops, sufficient to cover the distance he is striking from, round his thumb and hand, and, directly the harpoon is let fly, bend forward so as to give scope for the line to get clear from out of its receptacle, usually managing to secure it, however, before it is entirely played out: should he miss it he has the extra labour of paddling after the floating shaft to pick it up again. Further north, in the Barron River district, the hunter may sometimes find it necessary to disconnect the shaft after striking the animal, when he will fix the connecting-line to a light shield, and, throwing it over-board, make it act as a float (*R. A. Johnstone*). The Bloomfield and Endeavour River, Cape Bedford, and Flinders Island natives, have the rope passing loosely through the aperture in the butt of the weapon, but no basket to hold its main portion, which is partly looped round the thumb and hand, the remainder being attached to the fore-part of the canoe. On the Batavia River, no harpoons have been used for many years past, but judging from the models made for me, the method of attachment of the connecting-line to the shaft was apparently identical with that met with on the Keppels. Both on the Batavia and Pennefather Rivers, it is said that in the old days, when turtle-hunting with wooden-headed harpoons, it was no unusual occurrence, after having struck the animal, for the hunter to recover the shaft and re-attach the extremity of the line lately held in the free hand, or fixed in the canoe, and take a second shot: (an identical method which I recently saw employed at Dunk Island with iron-headed implements). By this means, two barbed-heads were made to pierce the soft tissues (neck, posterior, armpit, etc.), and their liability to tear through the flesh when the animal dragged—and this might sometimes continue for as much as nine or ten hours—was reduced to a minimum. The Pennefather River natives assured me that, until the introduction of the iron-headed harpoon, with its power of piercing the scutum and so obtaining a firmer hold, there was always considerable skill required in securing this particular creature under these conditions, that turtle-flesh was consequently always a comparative rarity in those days, and for that reason tabu'd to all the females and young males of the tribe. It is almost safe to say that, at the present time, a metal head has everywhere replaced the wooden one, an iron rod constituting the usual substitute, after filing to a gradually-tapering point, sometimes accompanied with a filing along the sides (Fig. 245). The most ingenious adaptation I have so far come across is an ordinary three-cornered iron-file, all three edges of which have been filed into tooth-like projections pointing backwards (Fig. 246). Pointed metal heads have the advantage of piercing the scutum of a turtle, but are at a disadvantage (owing to the absence of a barb), in not allowing of any very great pull on the rope being possible: for this reason, when employed by the Bloomfield, Endeavour River, Cape Bedford, or Flinders Island natives, the hunter dives into the water, guides his movements by the line, and seizes hold of the animal as best he can. On two or three occasions I have seen a European-manufactured typical iron-harpoon head employed.

Though mainly employed for hunting turtle, the harpoon was and is often used for the larger kinds of fish (*e.g.*, shark, trevally) and for dugong. For the last mentioned creature, however, there was a modification of the implement (certainly on the Bloomfield, Endeavour, and Flinders group), in that the barbed-head was multiple, consisting of three wooden components morticed into a basal piece after the fashion of a "fish-spear," each of the three heads being provided with a single wooden barb pointing inwards: these wooden barbed-heads are now replaced by three iron wires. With the dugong at Cape Bedford, the hunter, after striking, clings to the rope, jumps overboard, and is dragged along: it is a case now of the animal either being drowned, etc., in shallow water, or getting into deep water, and so tiring the blackfellow out.

The term for a harpoon is ngatta on the Pennefather River, kokoni at Cape Bedford, and kanjo at Dunk Island: the two latter names also express the shaft. The Tarumbal natives (Rockhampton) spoke of the barbed-head as mirain, a term which often gave the name to the whole implement: the Keppel Islanders called it banggari, the Tully Blacks changkari, the Pennefather natives ngonja, and the Cape

Bedford ones kuradan. The shaft was known as dallo or kanjo at the mouth of the Tully, yinili on the Keppels, and kannai at Rockhampton. The connecting-line was called yarul, yurul, gumbin, at Keppel Island, Rockhampton, and Cape Bedford respectively.

67. Fish-Clubs.—Along the whole Gulf coast-line, from the Batavia to the Norman River, a common method of fishing is for the blacks to go into the water at night-time, and, holding a torch aloft, attract the fish to the surface, and club them with a special implement as they rise. This wooden spatulate club (Fig. 247) with sharpened edges, rounded at both ends, though wider at its distal than proximal extremity, is as much as 30 inches long: it is coloured red and white. On the Pennefather River, it is made from the timber of the *Eugenia carissoides*, F. v. M., and called te-ingkajana. The handle of such a weapon is often nicked or coated with cement-substance, so as to minimise the risk of slipping. The Koko-minni blacks of the Palmer have a somewhat similar implement, the an-góra, but with a comparatively-squarish distal end and wider blade (Fig. 248) made from "iron-wood." Along the eastern coast-line the ordinary throwing-sticks or nullas are often used, under similar circumstances, for clubbing fish.

68. Fish-Hooks.—In a previous Bulletin of mine [No. 3: "Food: Its Search, Capture, and Preparation." Sect. 15 (f)] the various kinds of fish-hook met with in North Queensland have been shortly described. In the present one, they are illustrated as follows:—the tendril of the *Hugonia Jenkinsii*, F. v. M. (Fig. 249), a natural form, sometimes replaced by the "hook" of the lawyer-cane (*Calamus* sp.); the crescentic pearl-shell (Figs. 250, 251), tortoise-shell (Fig. 252), and cocoa-nut (Fig. 253) fish-hook of portions of the eastern coast-line; their modern imitations in iron wire (Fig. 254); the angular bone-bearded hook (Figs. 255, 256) of Princess Charlotte Bay, etc.; the tortoise-shell "bent-pin" hook (Figs. 257, 258) of the Batavia, Pennefather, and Embley Rivers on the Gulf coast, and of the Palm Islands on the east coast.

Particulars of one or two of these varieties, so far as actual manufacture is concerned, require further notice.

I watched the making of the crescent-shaped shell-hook at Cape Grafton in 1898: it was as follows: Picking a fresh "pearl" shell (*Perna Cumingii*, Reeve) the operator chipped round and round the valve between two stones, until he at last succeeded in breaking it down to a more or less circular plate about 2 inches in diameter, with rough uneven edges. He next placed two pointed pieces of hardwood on the fire, and as soon as their sharpened ends were burnt and charred, put the smouldering extremities close to the centre of this shell-plate (Fig. 259a), and blowing upon them with no inconsiderable force, caused the flame to play only upon its very centre, which was thus rendered comparatively brittle. But little difficulty was then experienced in breaking through, at this spot, with a pencil of white coral: the hole, once made, became gradually enlarged into the required oval (Fig. 259b) by filing backwards and forwards with the coral, which at very frequent intervals was dipped into water to assist in the grinding. The uneven outer edge of the oval ring so produced was next gradually ground into shape (Fig. 259c) until the desired width of hook was reached. The final processes consisted in very carefully grinding its middle (Fig. 259d, e, f) up and down on a sharp vertical edge of rock until a break was obtained, and then finishing off with the rock and coral-file into the completed crescentic form. I learnt that these Cape Grafton blacks also manufactured hooks from a fresh-water shell, not yet scientifically identified by me, with the local name of chiberi: they speak of the *Perna* shell as we-ta, the fishing-line as ko-mai, and the hook as karkal. On the Lower Tully River, the hook is similarly manufactured from the *Perna*, the only difference being that no fire is used, the boring of the ring with the coral-pencil being commenced very gently and carefully. Certain natives of the neighbouring Dunk Island told me that they used to make their hooks from the "black-lip" shell (*Meleagrina margaritifera*, Linne). The following are extracts from Cook's Voyages concerning fish-hooks on the Endeavour River, where such articles are now unknown: . . . "Their fish-hooks are very neatly made, and some of them are exceedingly small" . . . "bags containing some fish-hooks and lines, a shell or two, out of which hooks are made" . . . and, in reference to their few tools, mention is made of "some shells and fragments of coral."

During the course of the year 1897 I had observed the progressive stages in the manufacture of the crescent-shaped cocoa-nut and tortoise-shell fish-hooks at Keppel Island: they were similar to those already described at Cape Grafton and the Tully, save that the central aperture was commenced with a quartz-drill.

In connection with these hooks, and their peculiarity of shape, "it is difficult to imagine that a fish could be caught with such a contrivance, as, once hooked, the slightest slackening of the line would allow the fish to escape: but I have often seen a blackfellow land a fish with this kind of hook, when we could not with ours" (*R. A. Johnstone*, Barron River district).

The "bent-pin" tortoise-shell fish-hook (Figs. 257, 258) of the Batavia and Pennefather River is made as follows: A more or less irregularly outlined length of shell is wedged out of the scutum, ground down on a piece of stone, and finally finished off with a shell-scraper, so as to produce a head-less pin about 2 to 2½ inches long, tapering gradually from the blunt extremity to a fine point. This pointed end is now firmly inserted into a small hole (natural or artificial) in a billet of wood which is placed vertically into the ground. Resting upon the projecting pin is next placed another piece of wood, on the slant—the one end resting on the ground, the other free—and prevented from slipping off by being loosely tied to the vertical post with a loop or two of twine. A fire is then lighted, and, as the heat rises, the pin softens, and, with the superincumbent weight of the slanting timber, becomes more and more bent into a gentle curve: it is then removed, alternately dipped in water, heated at the fire, and bent with the

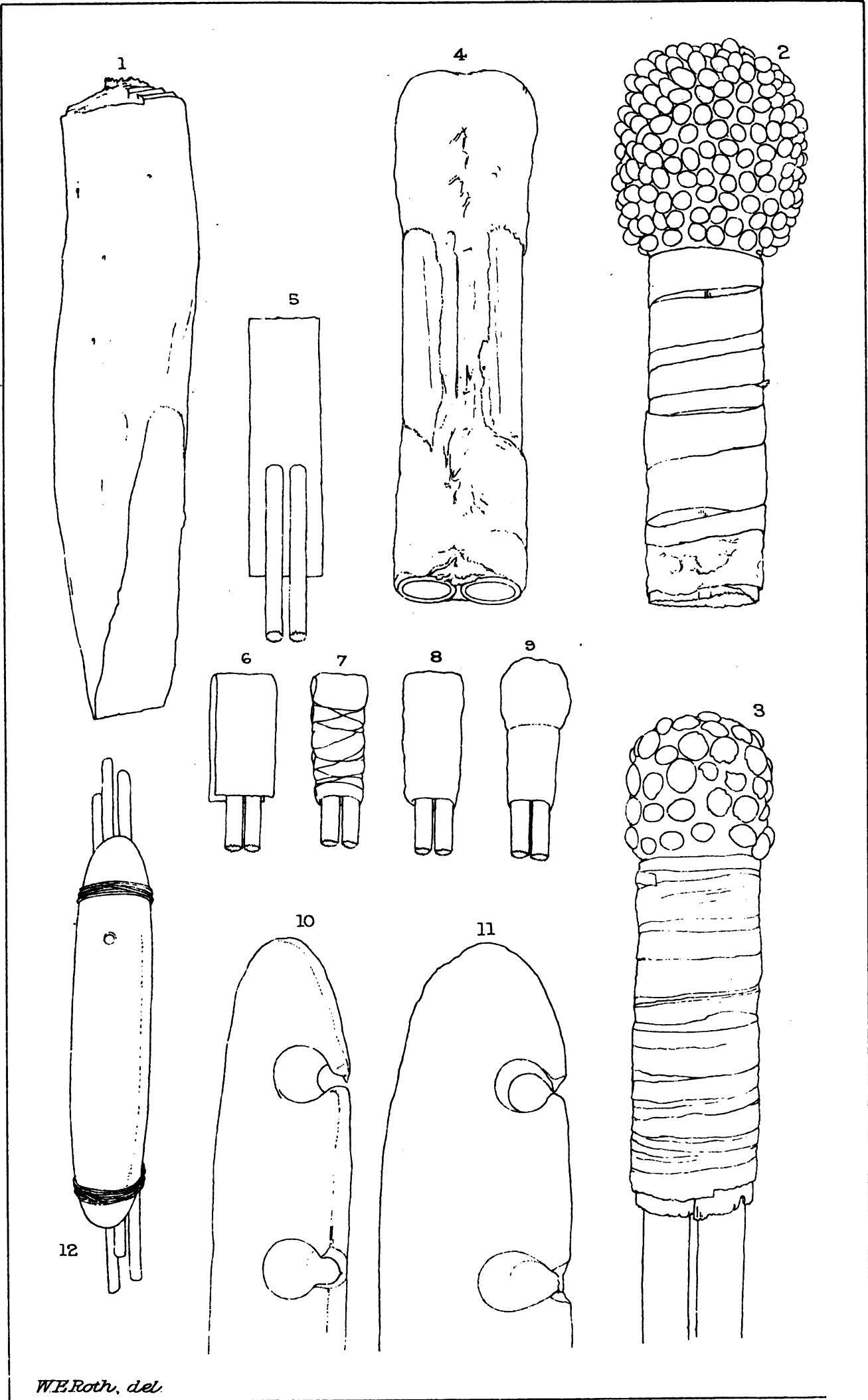
fingers until the required shape is obtained. I cannot refrain from commenting here on the fact that these hooks are not bent directly into the required shape by means of boiling water, for the process of boiling, though uncommon, is certainly known to these natives: but the latter may have reasons.

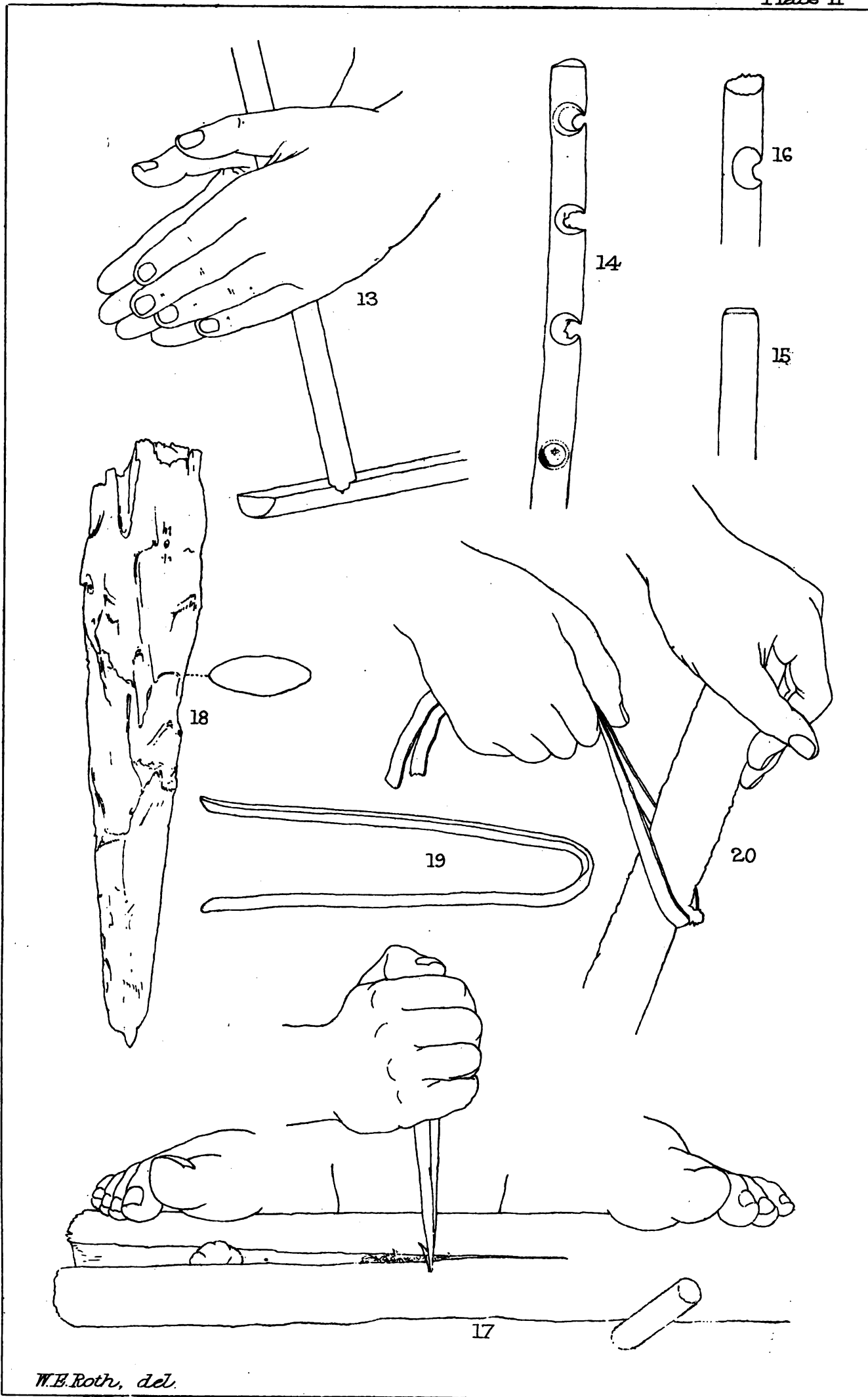
On the Palm Isles, where the bent-pin form of tortoise-shell hook has also been met with, Mr. Norris stated that he had seen them manufactured thus:—"A round pebble was heated in the fire, and a narrow strip of tortoise-shell bent across it, until the heat softened it, and the required curve was obtained."

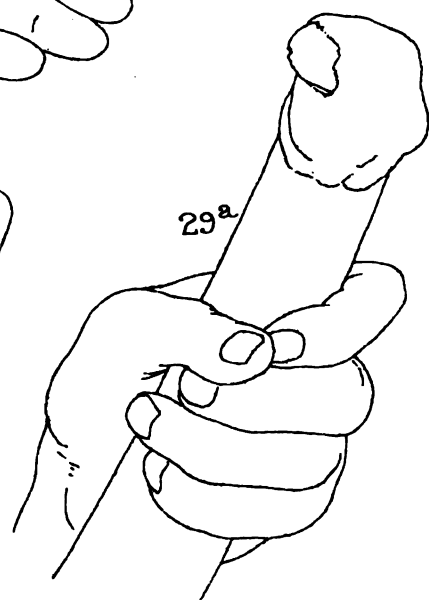
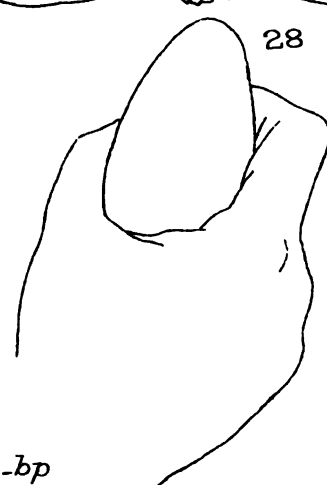
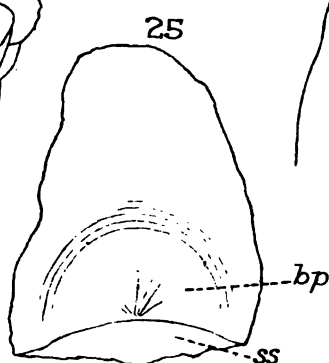
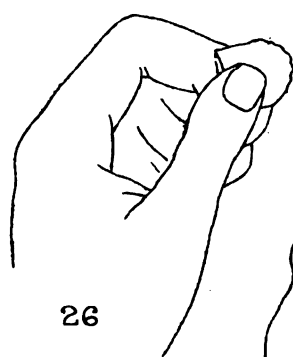
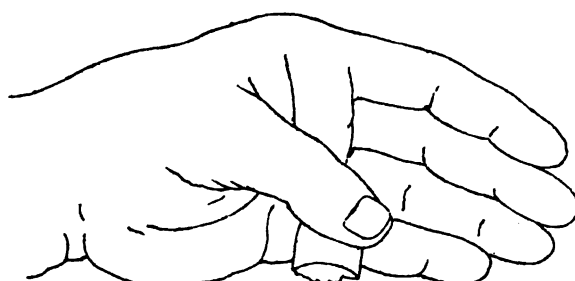
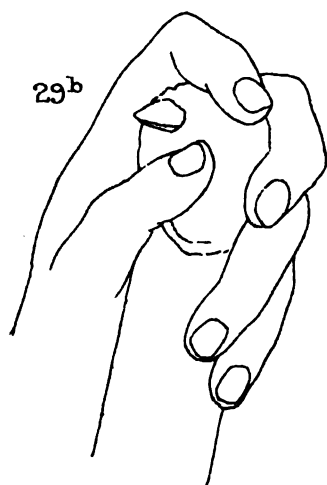
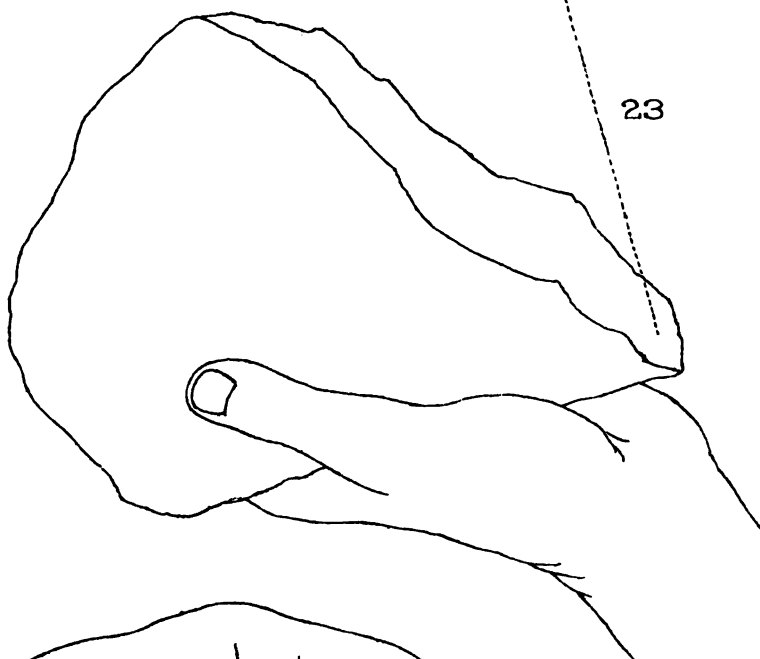
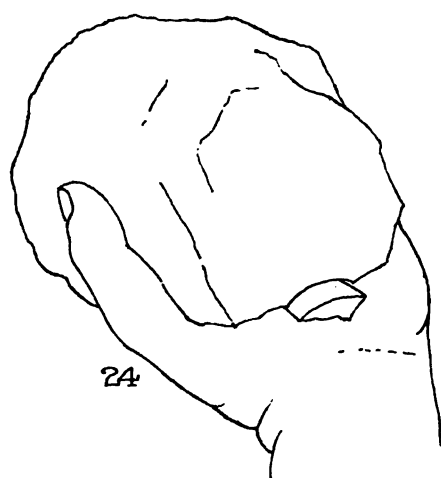
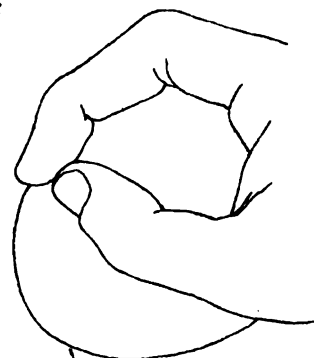
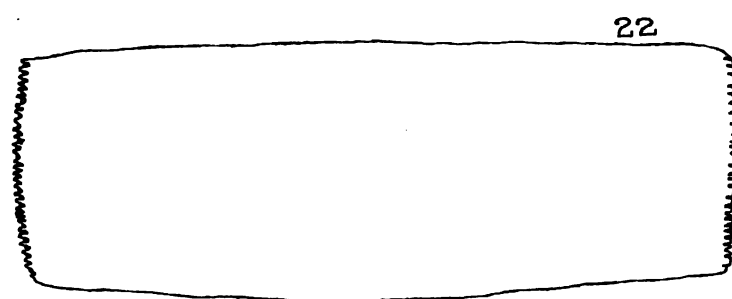
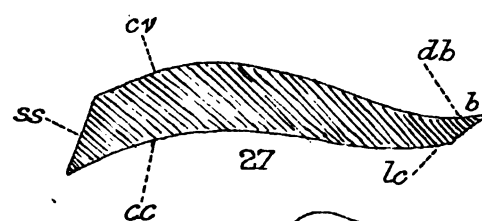
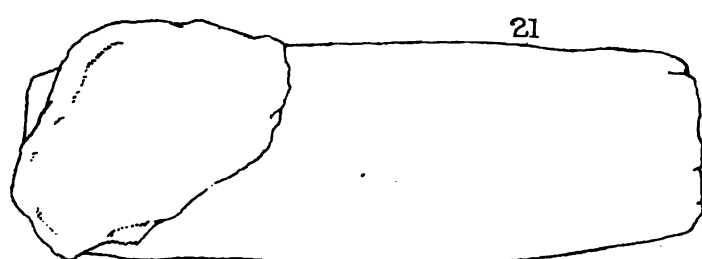
69. Throwing-Sticks.—The manufacture of the throwing-stick, nulla-nulla, etc., is gradually dying out throughout North Queensland. In the Boulia district (Fig. 260) it is made from the "gidyea" (*Acacia homalophylla*, A. Cunn.), coloured black with charcoal grease, and met with up to over 33 inches in length. The free end is enlarged, and tapers to a point: a good one is usually incised at the handle, and is covered with a longitudinal fluting, which reaches either to the tip or ceases abruptly about an inch from it. PPT. morro, MIT. maro. The implement is very similar at Princess Charlotte Bay: KRA. kunbai-il, KWA. pa-ul. On the Tully, there is another, a two-pronged variety (Fig. 261) met with, identical with that found lower down the coast-line: MAL. wirka.

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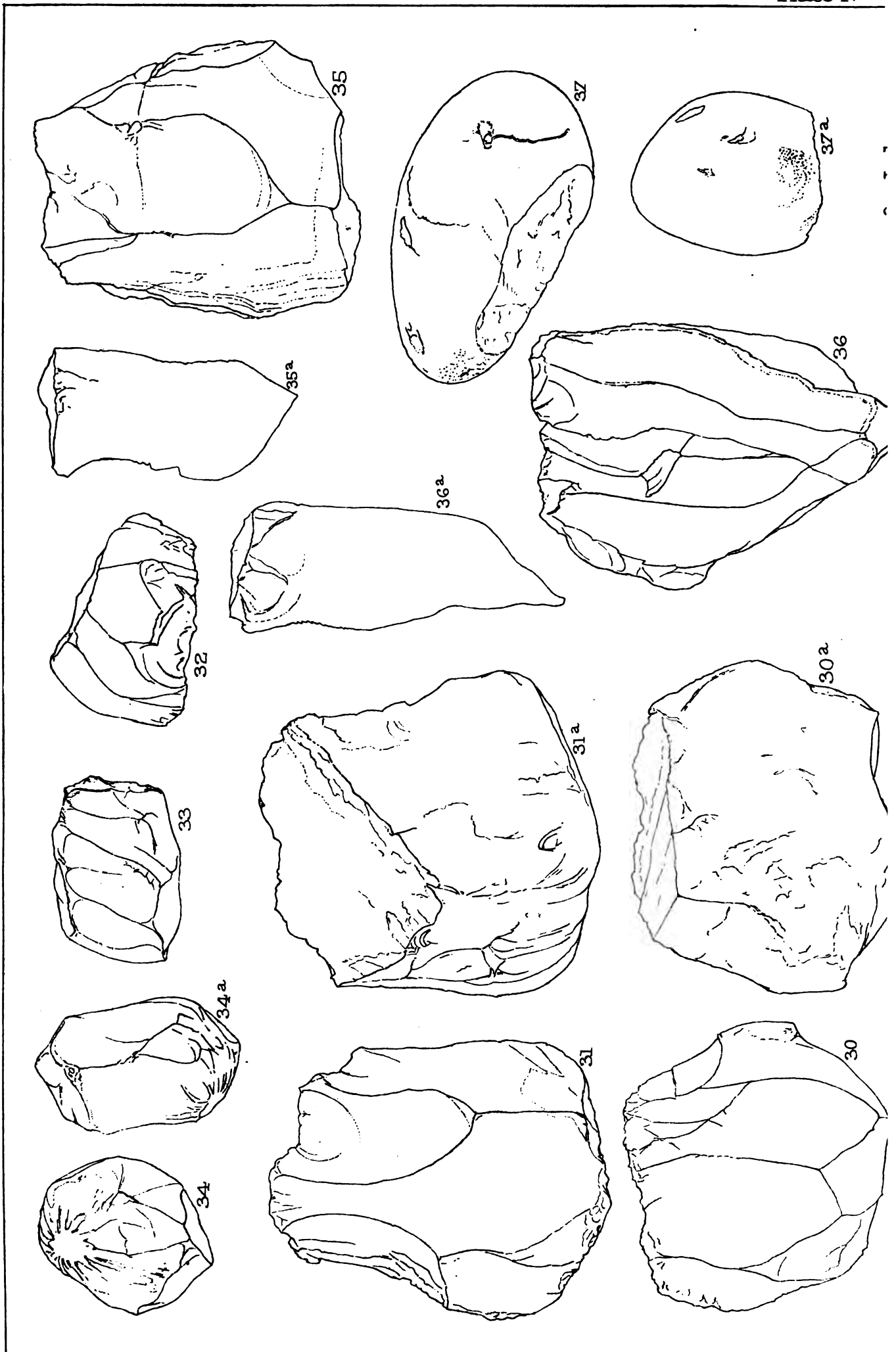


Plate V

38a



38b



38c



38d



38e



38f



38g



38h



39a



39b



39c



39d



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39f



39g



39h



40a



40b



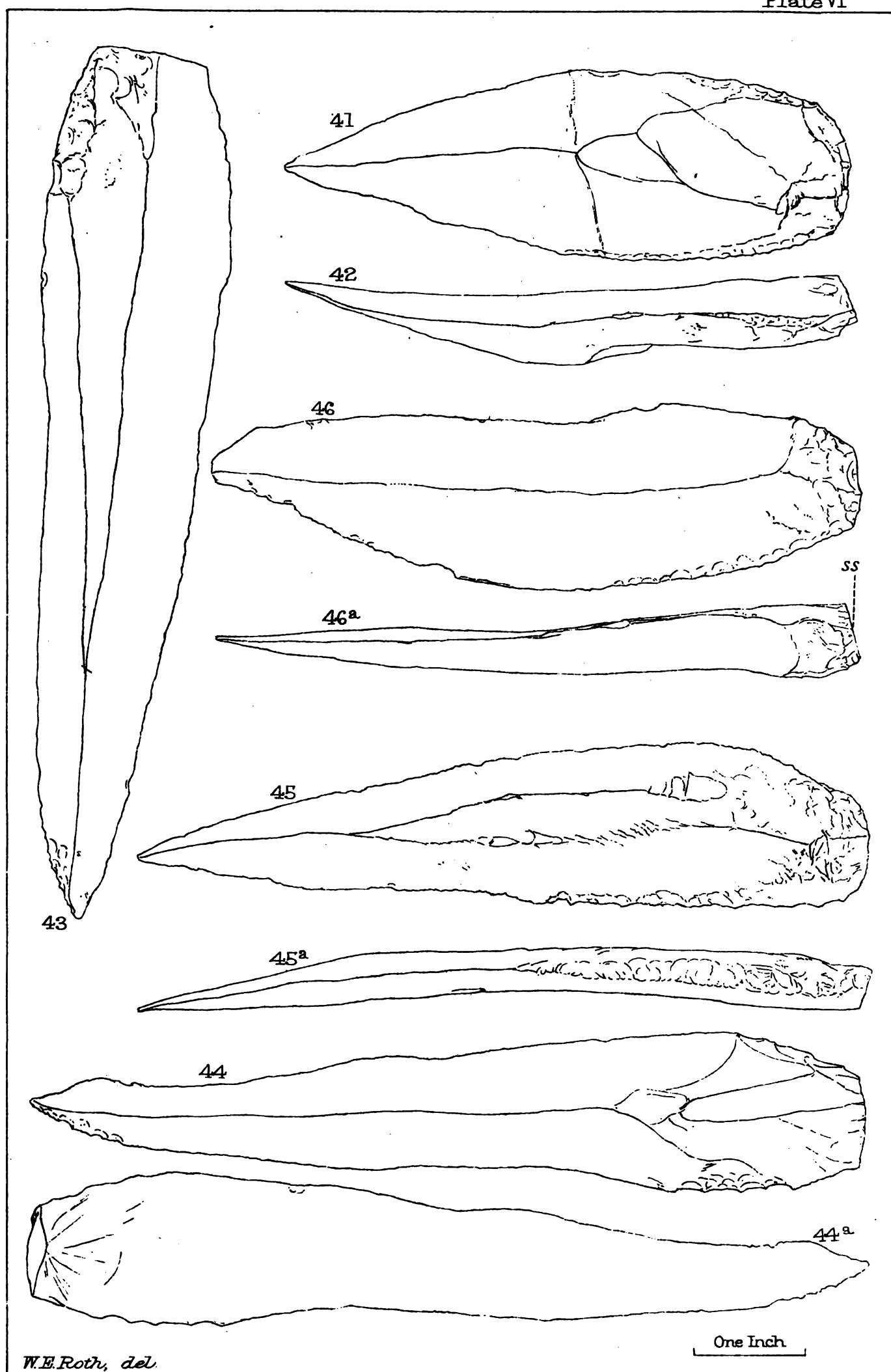
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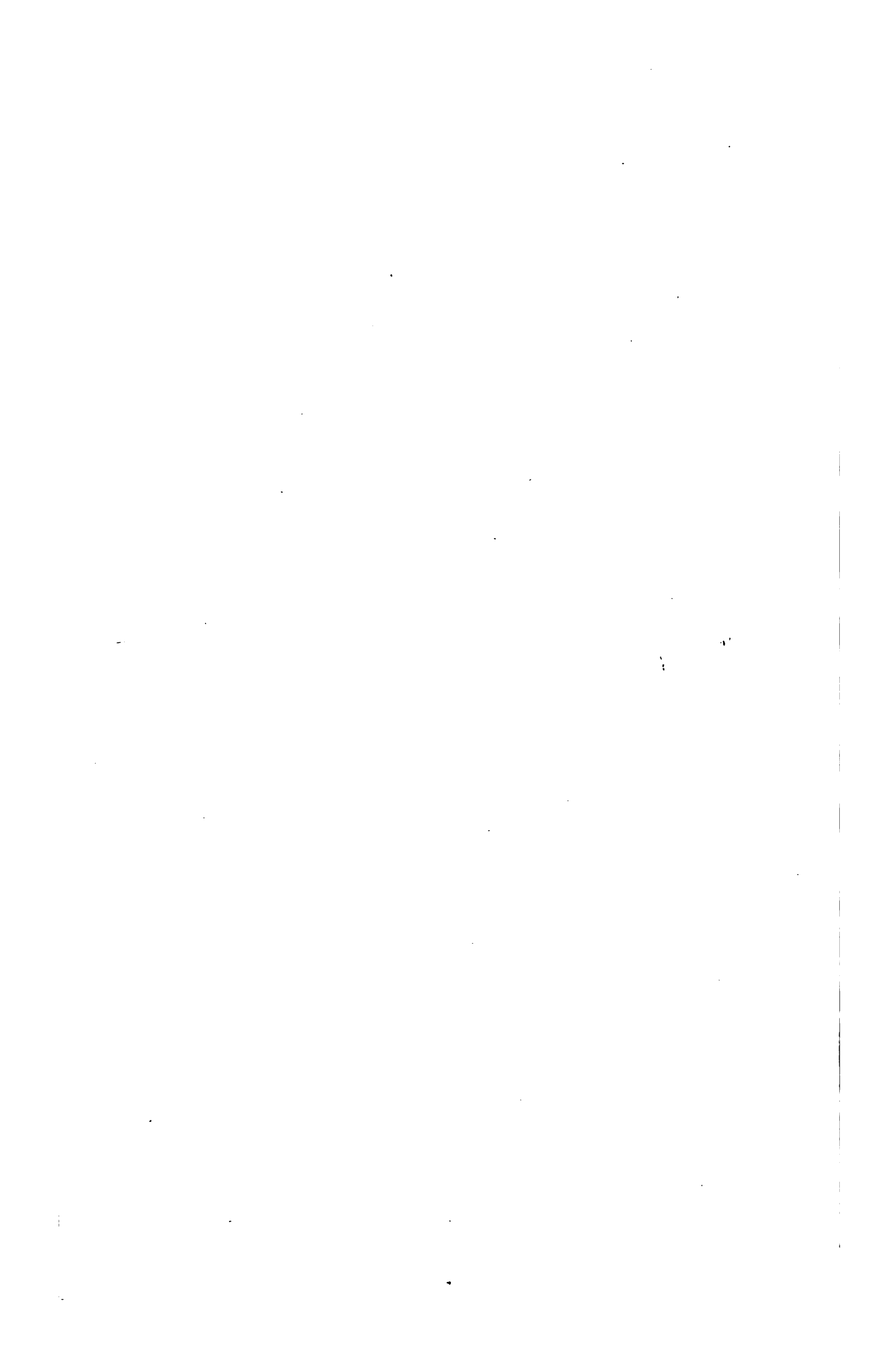
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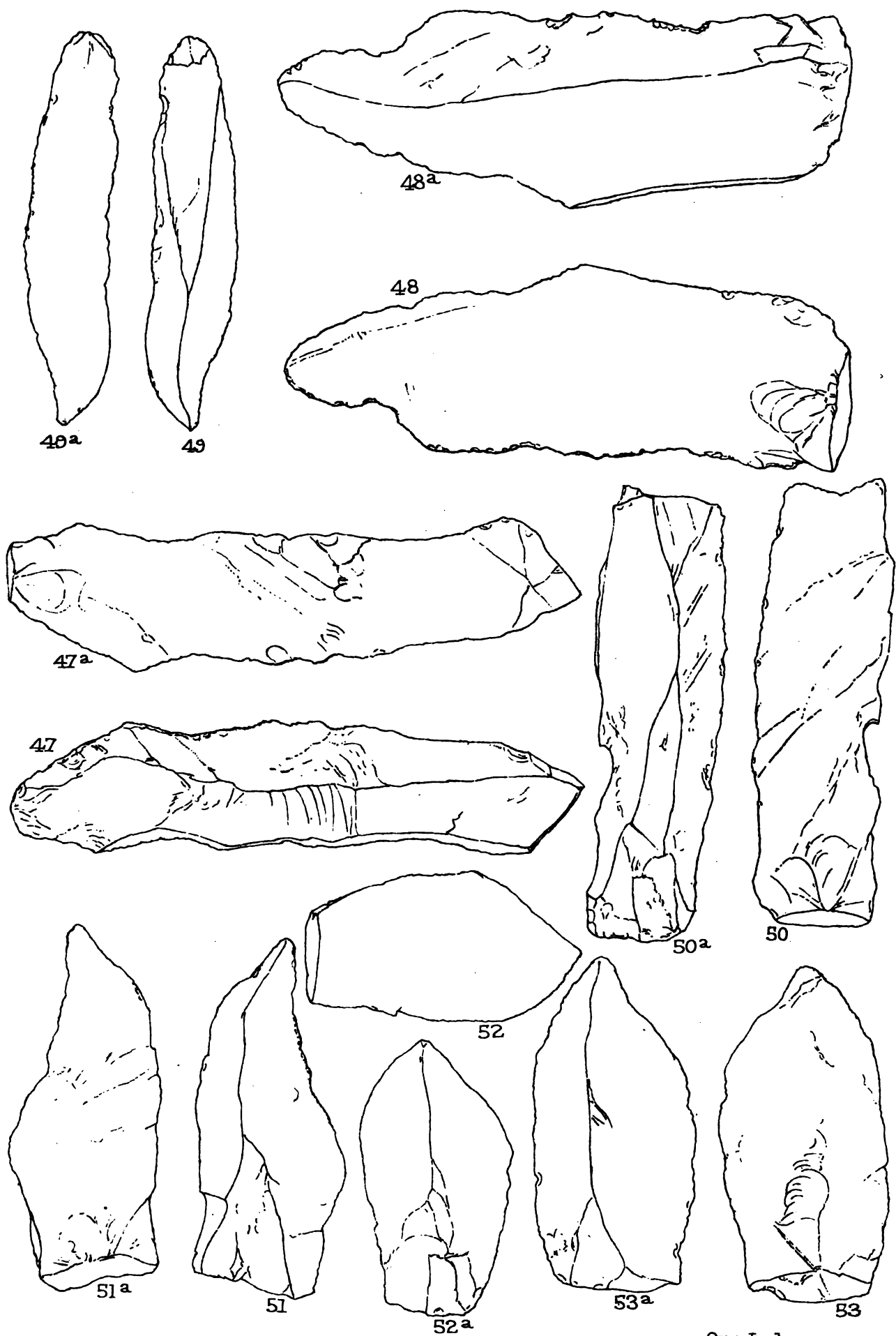


One Inch

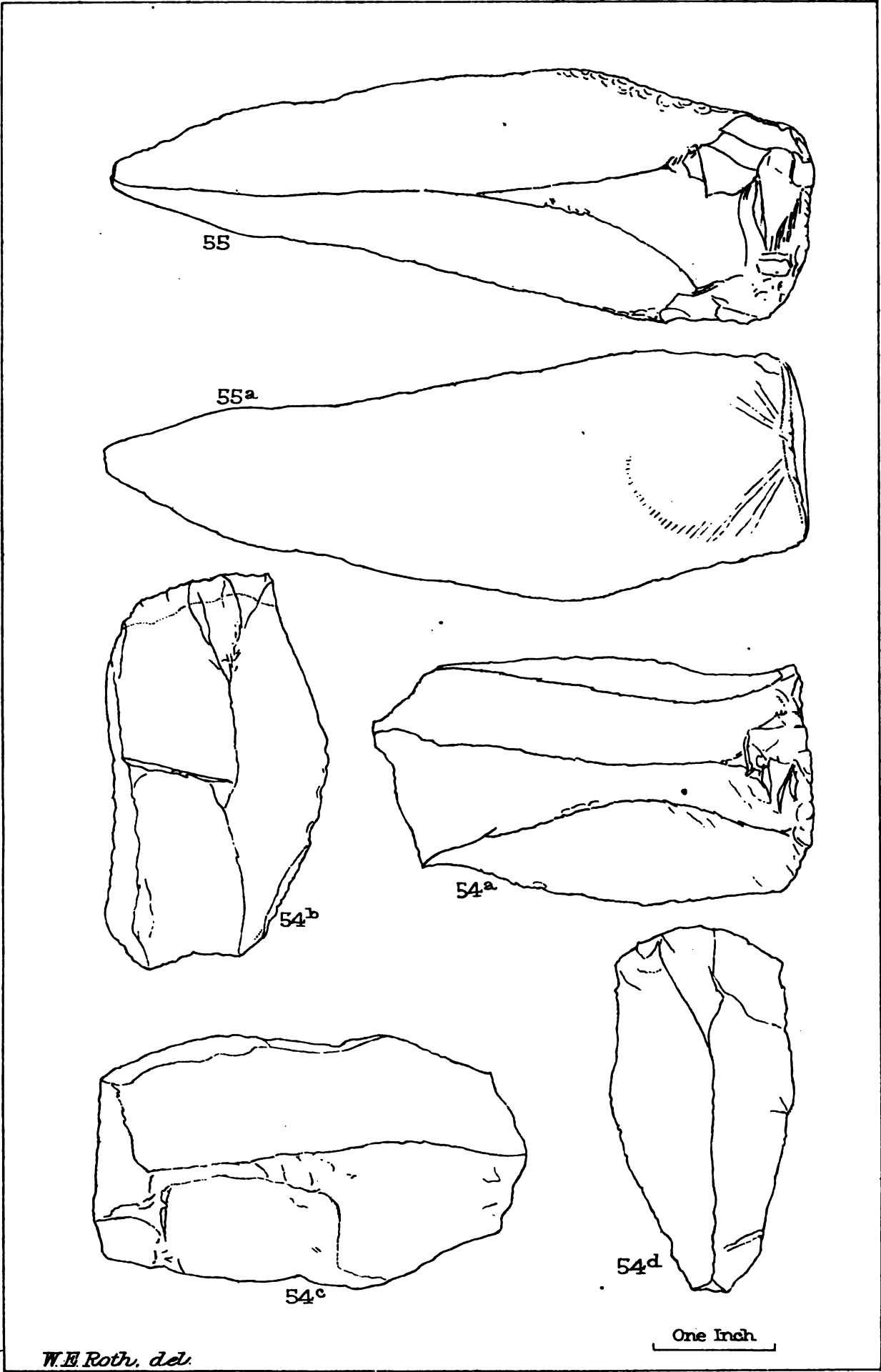


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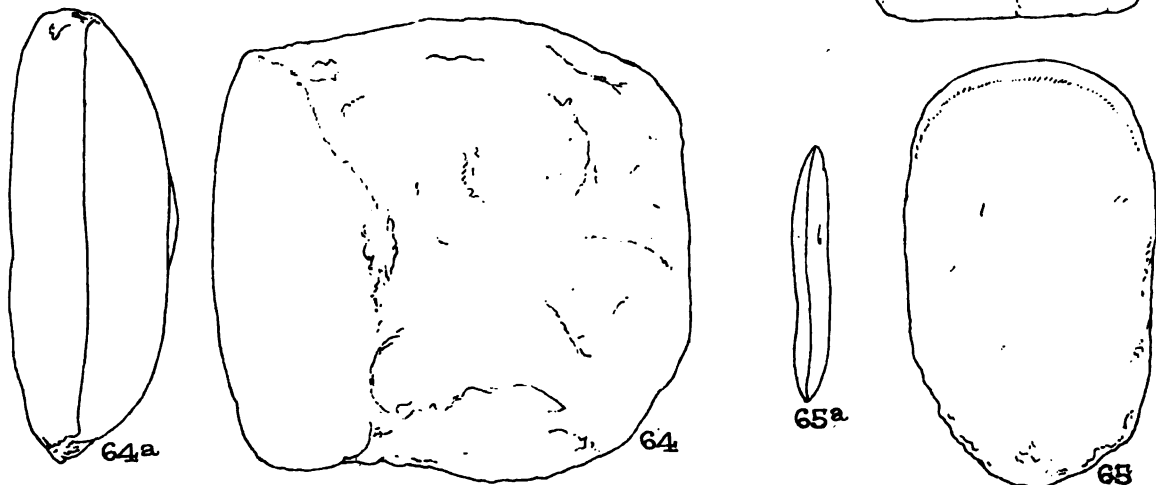
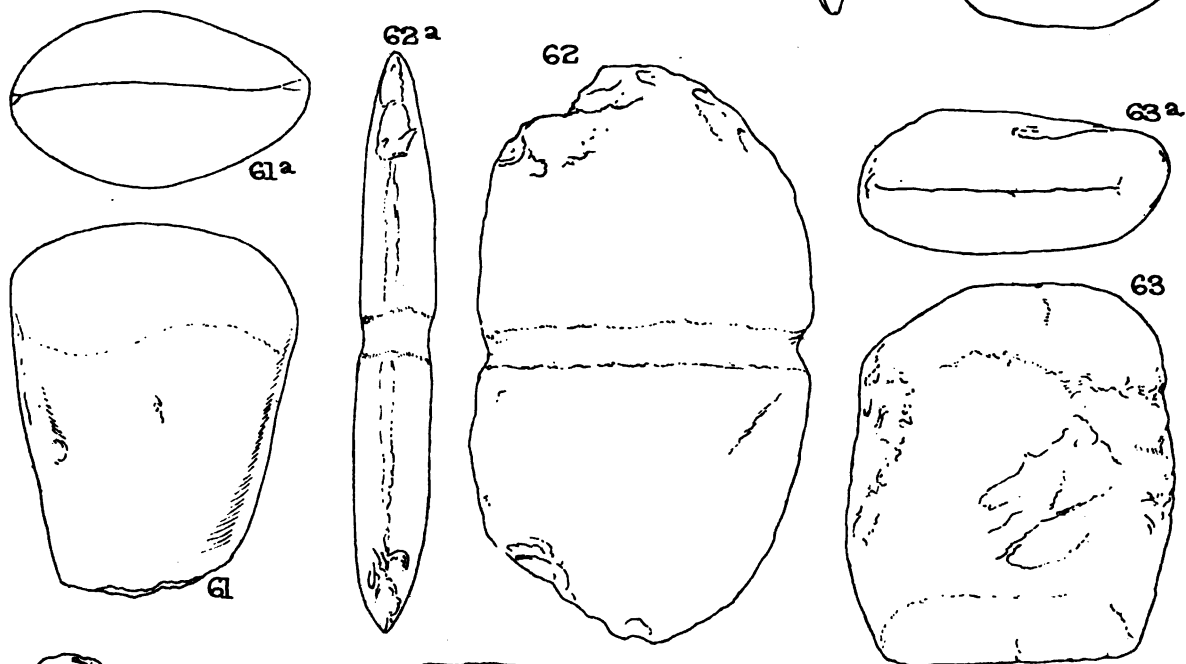
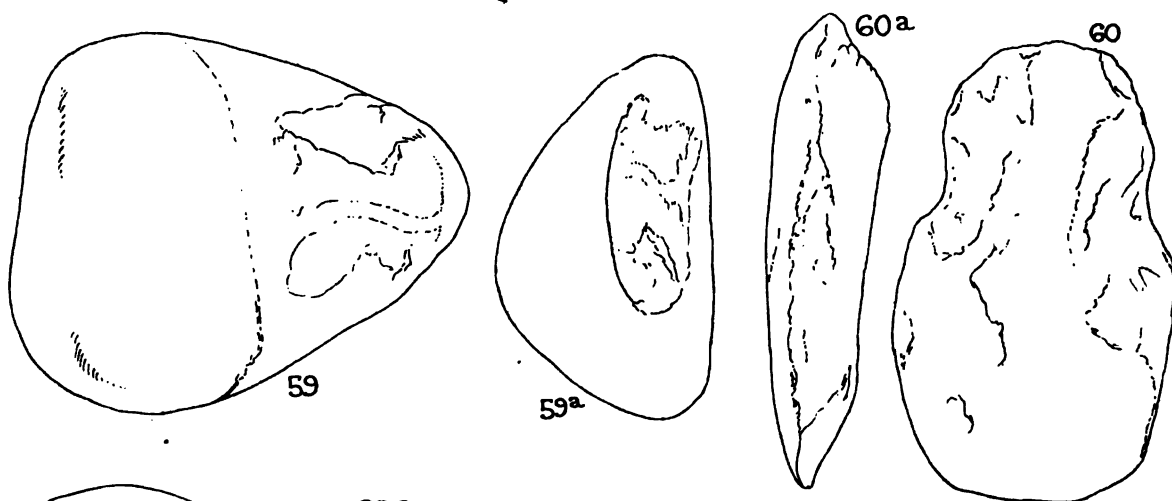
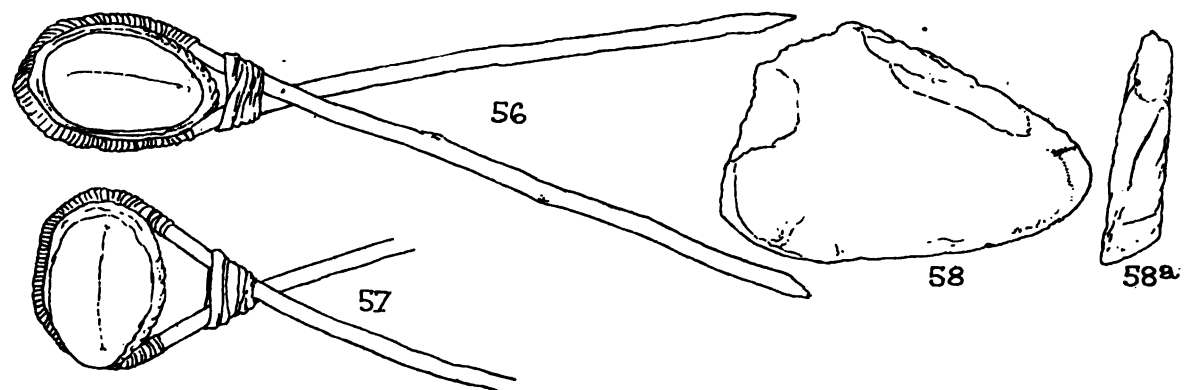


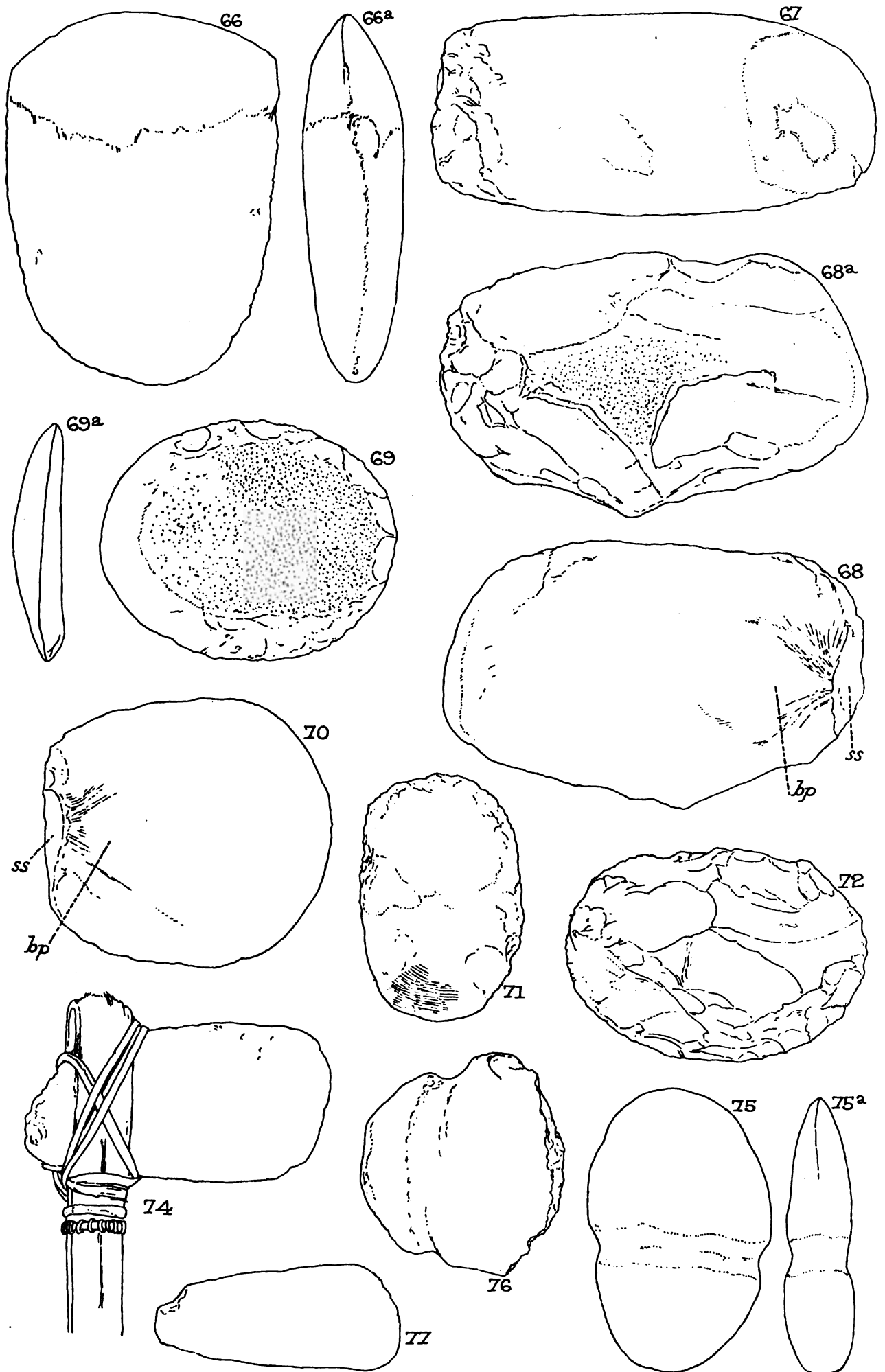


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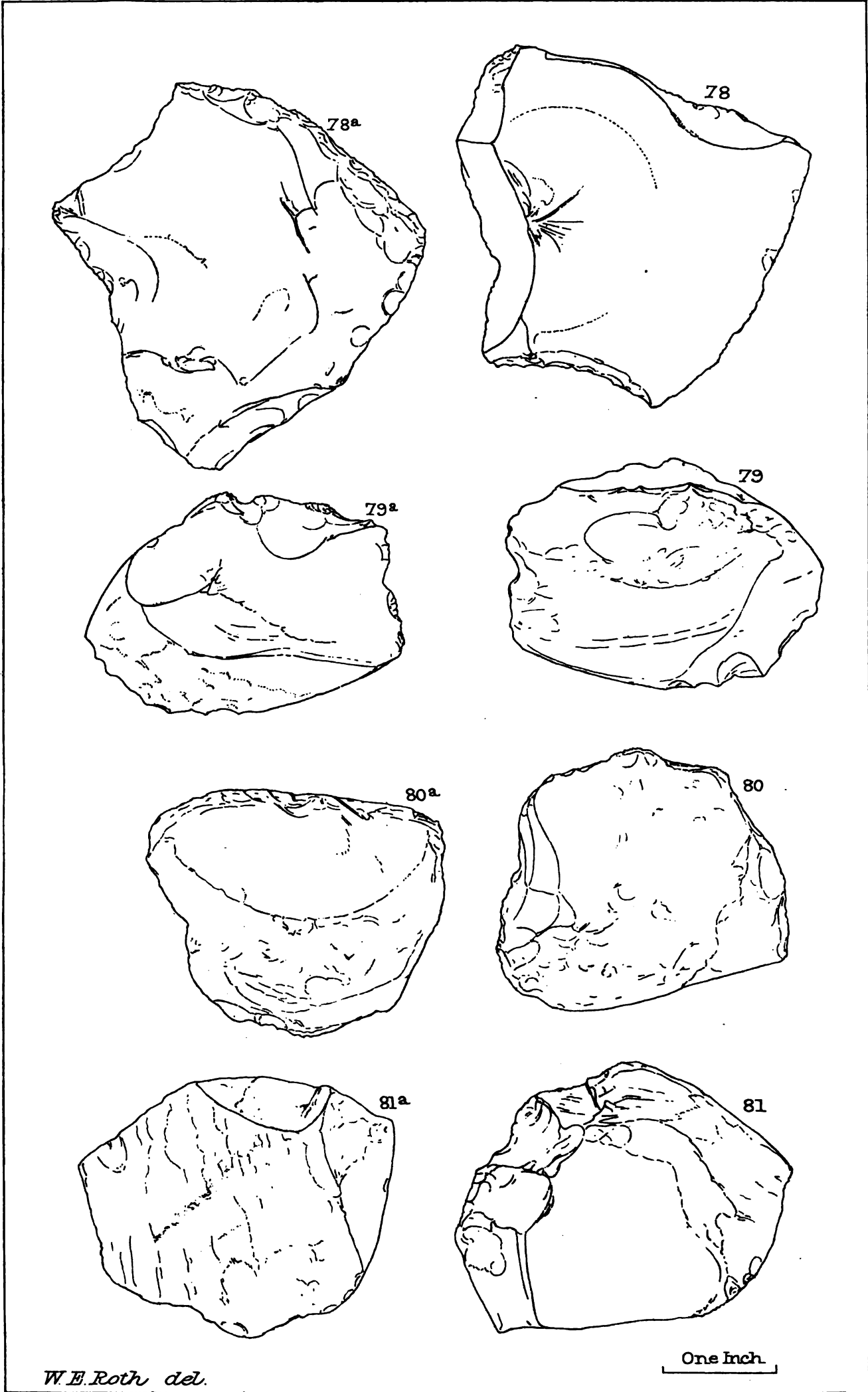


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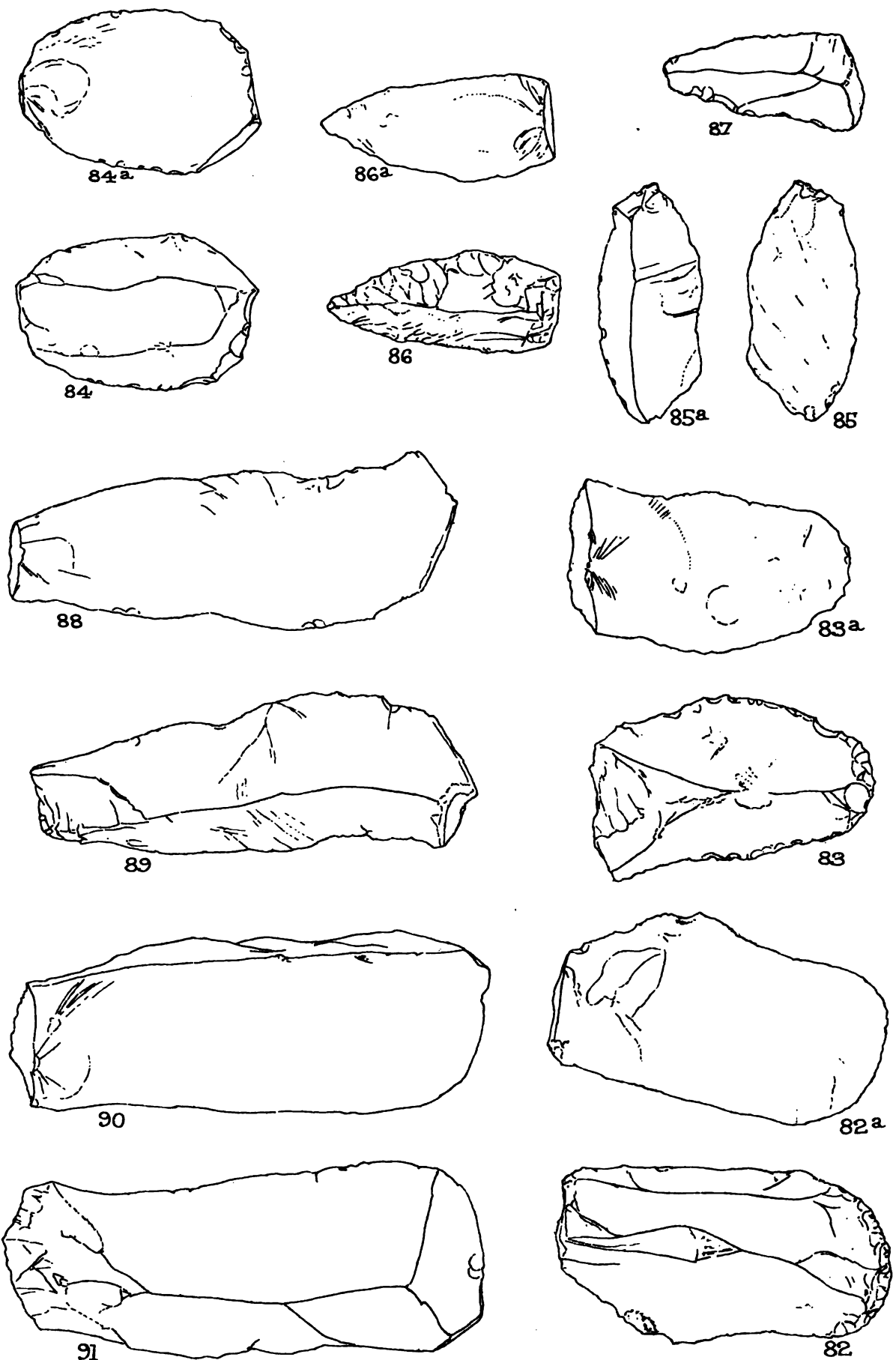




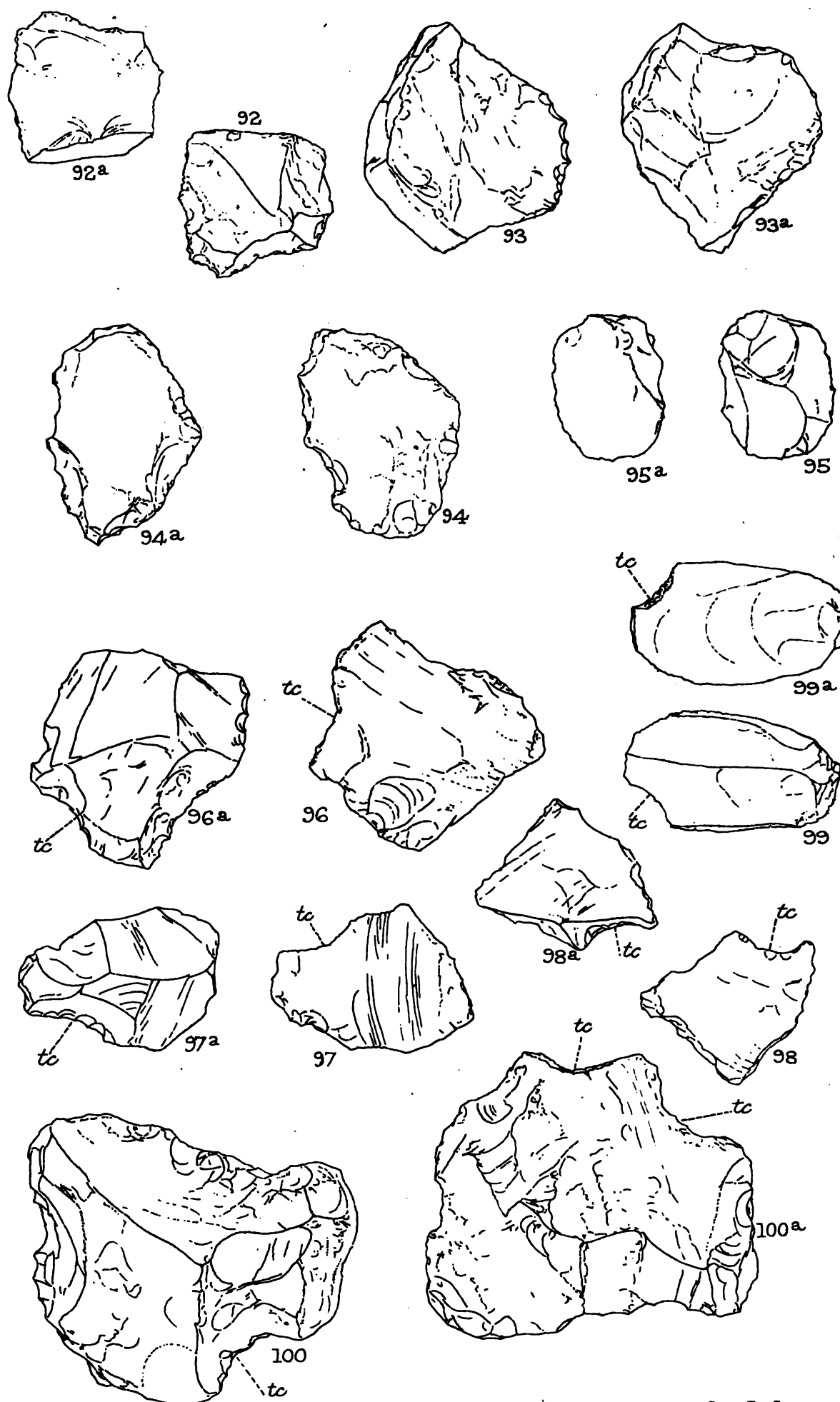
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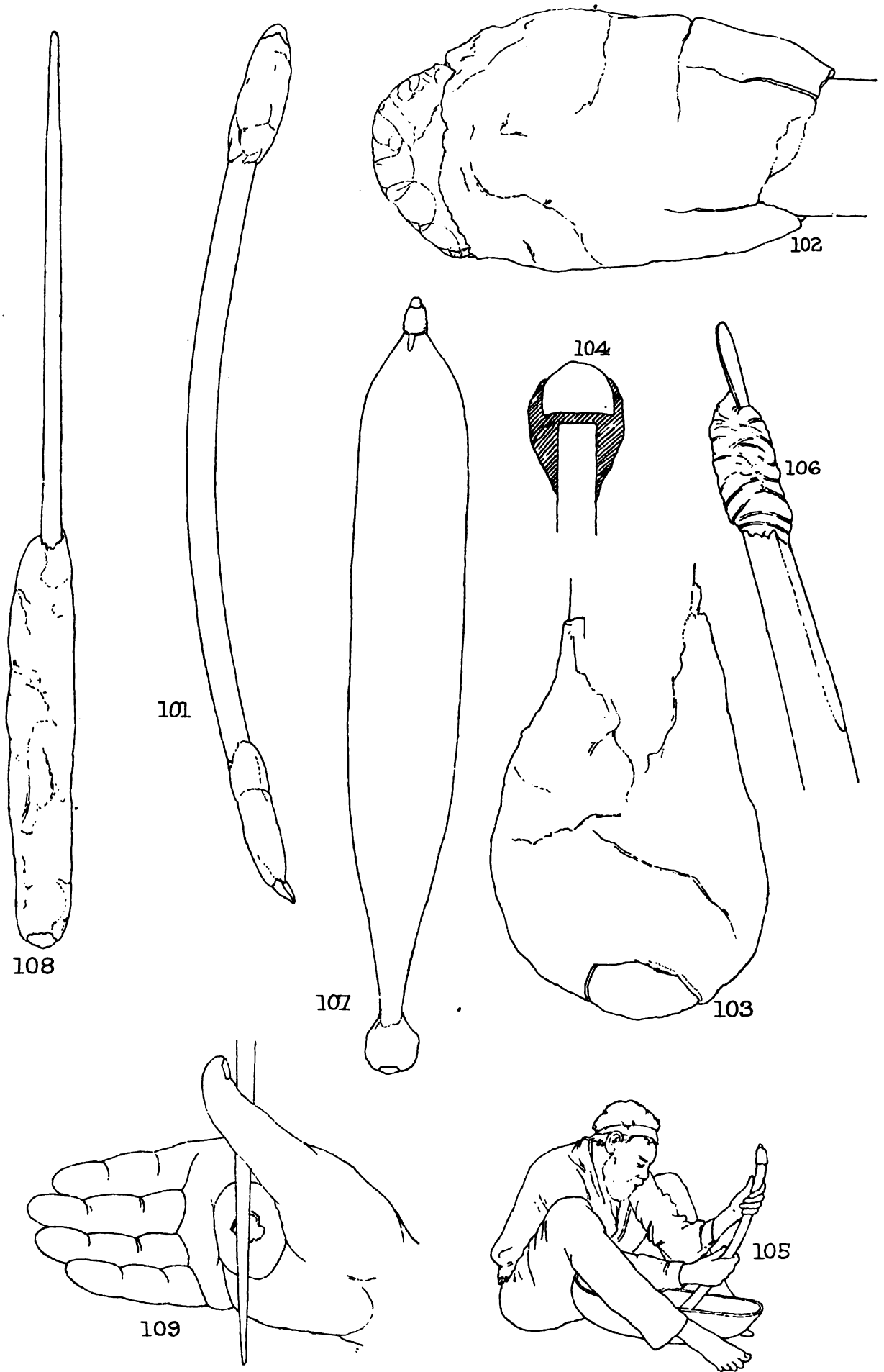
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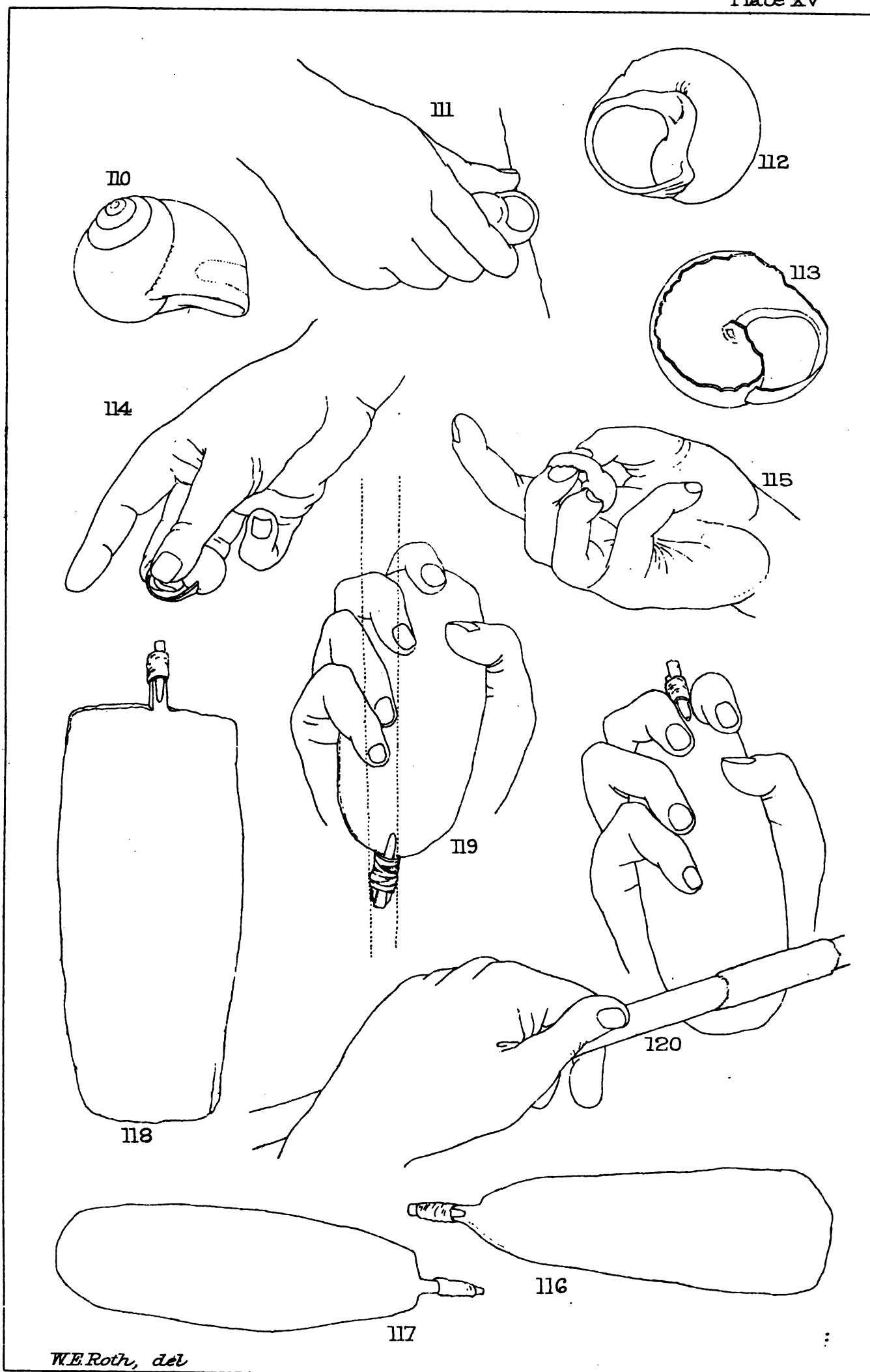
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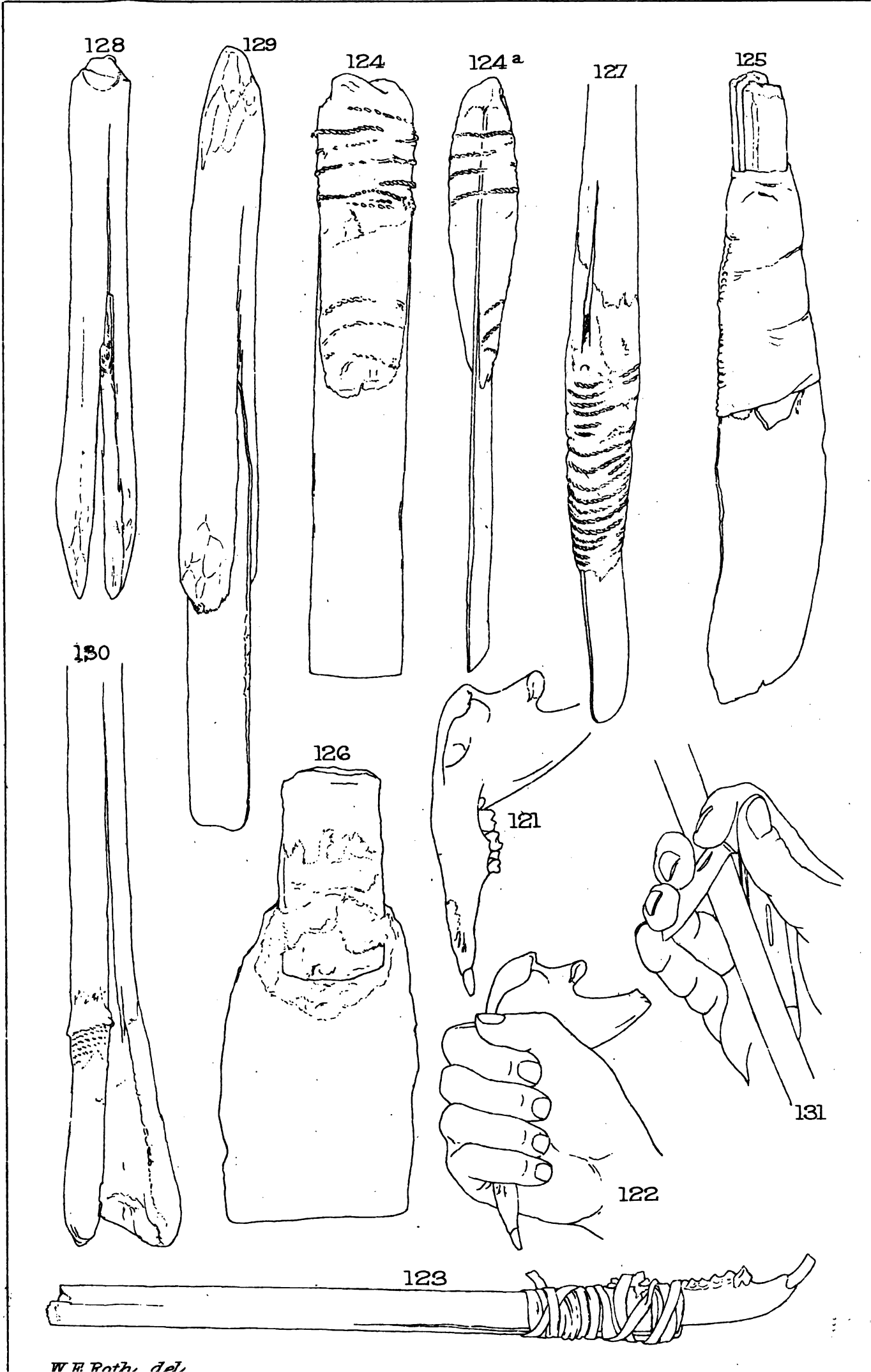
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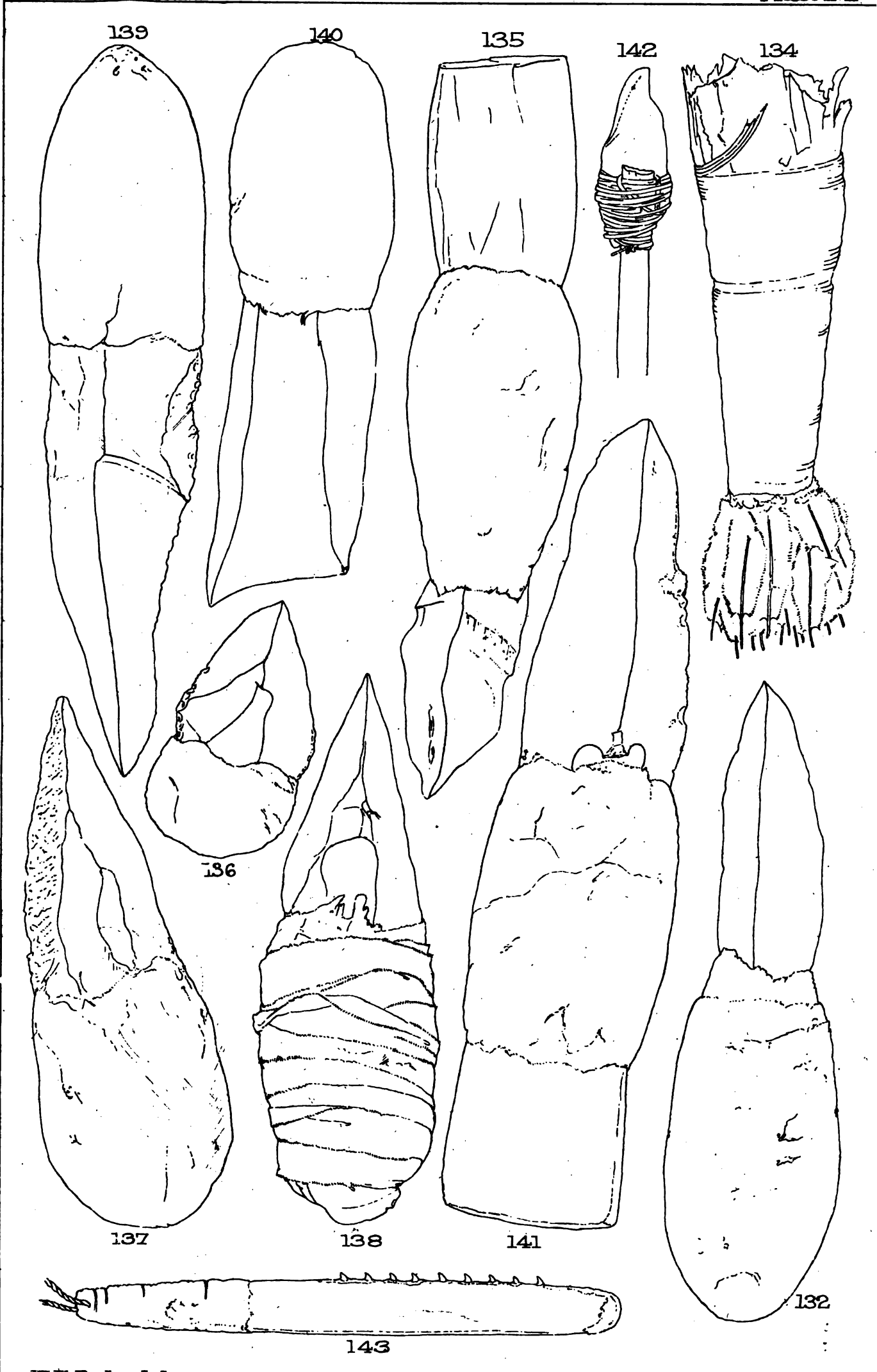


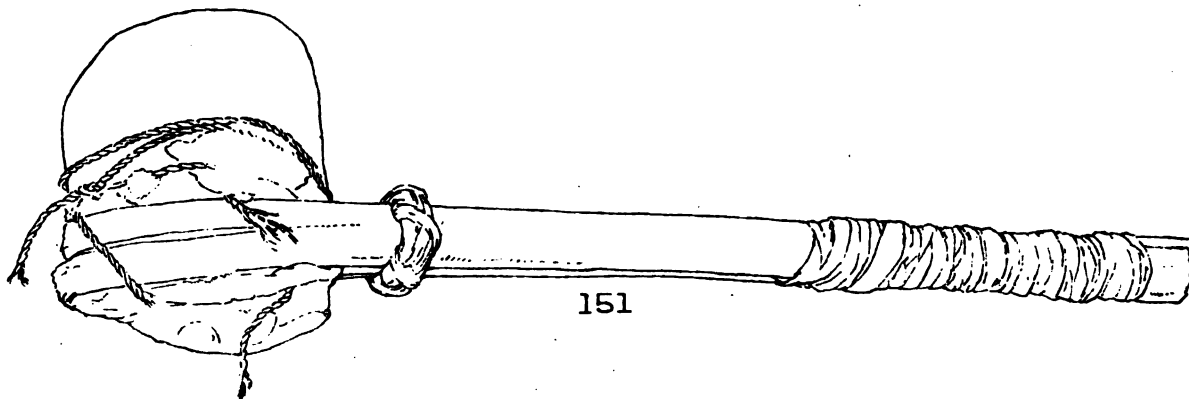
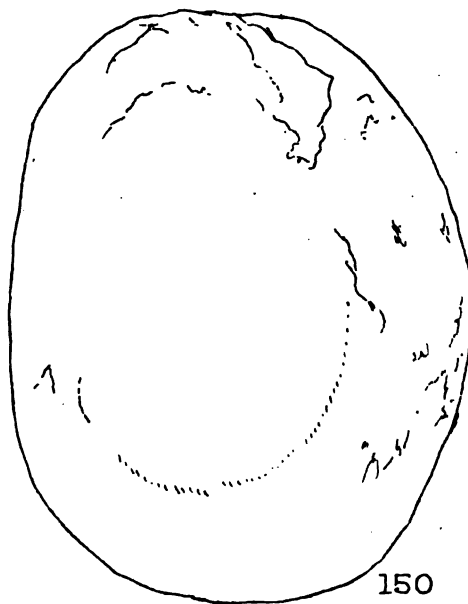
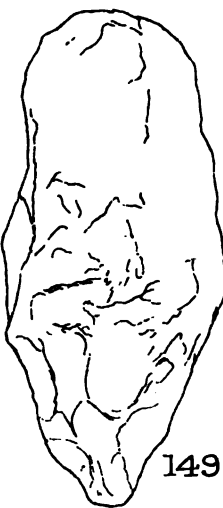
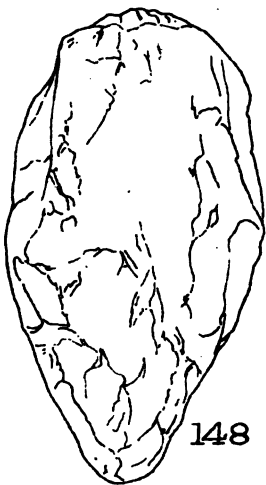
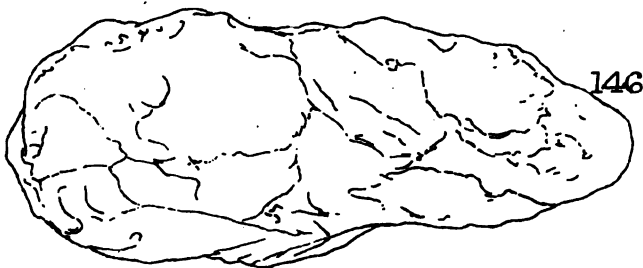
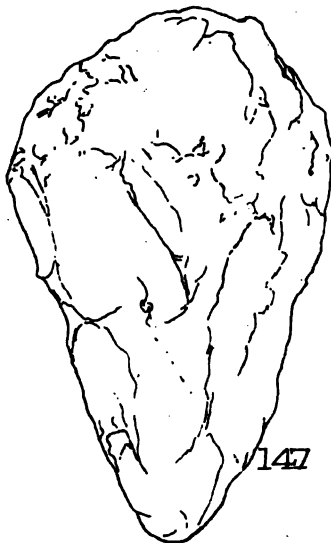
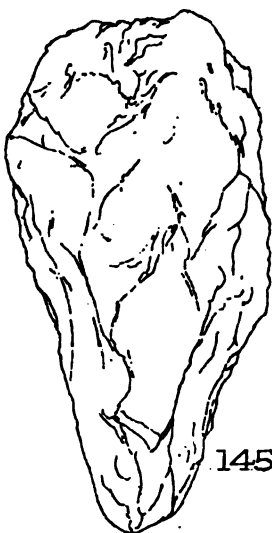
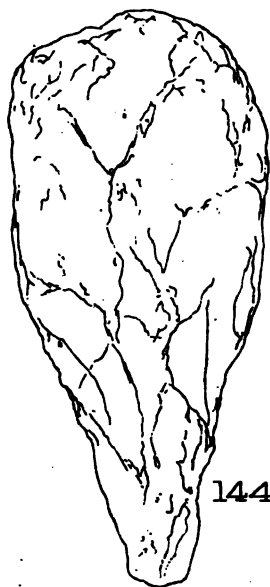
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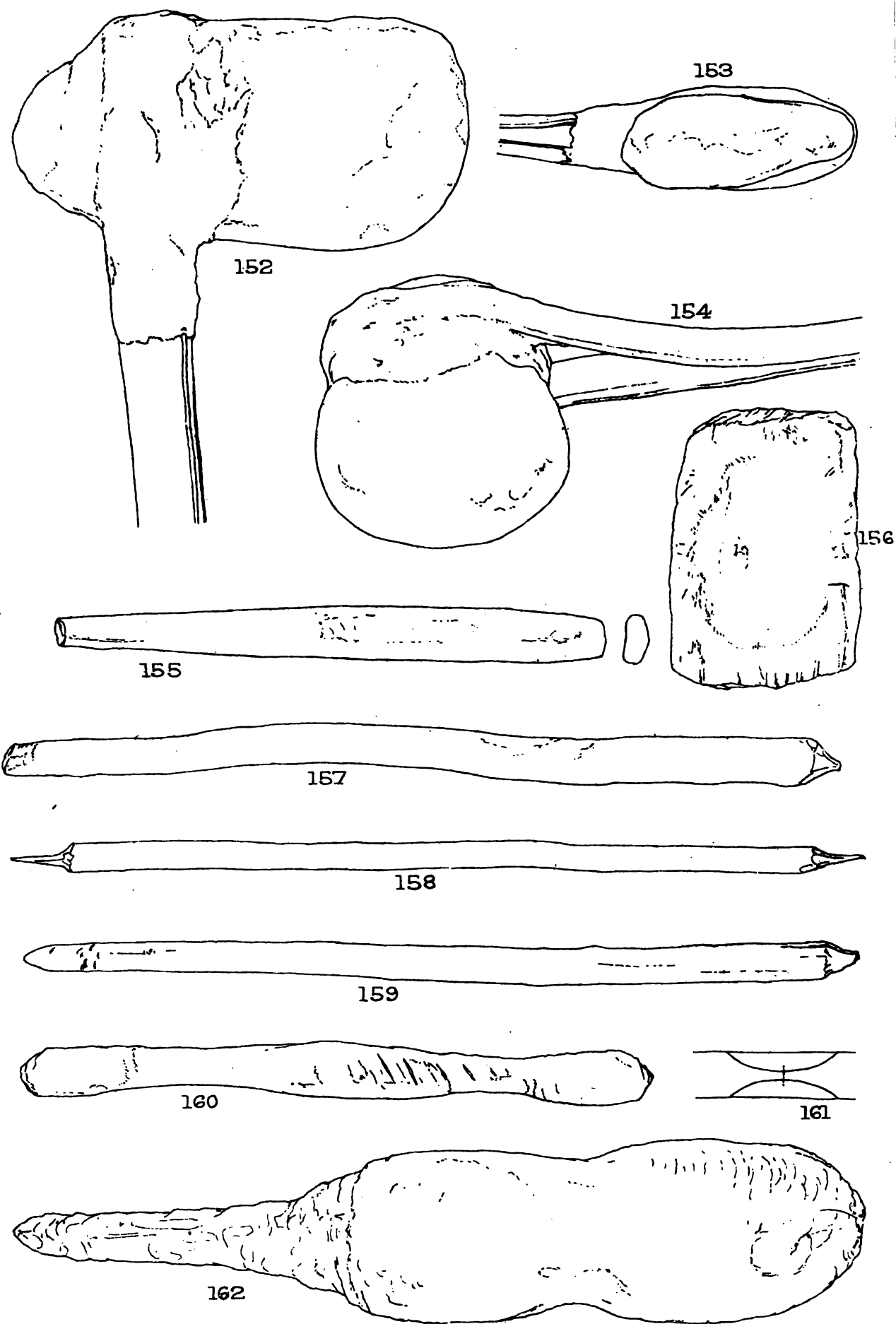
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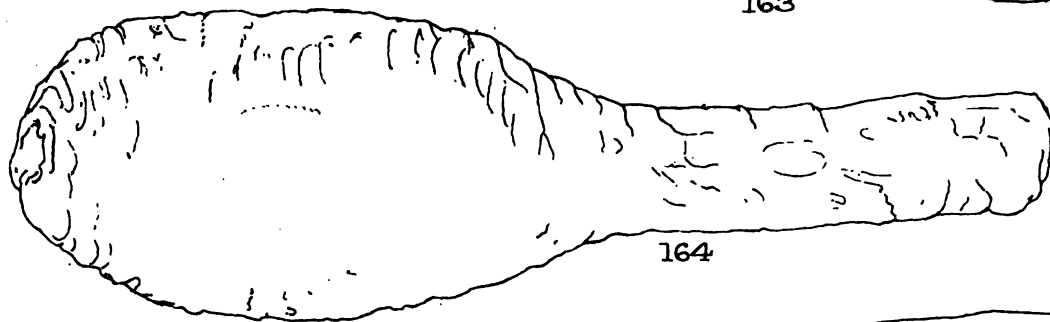
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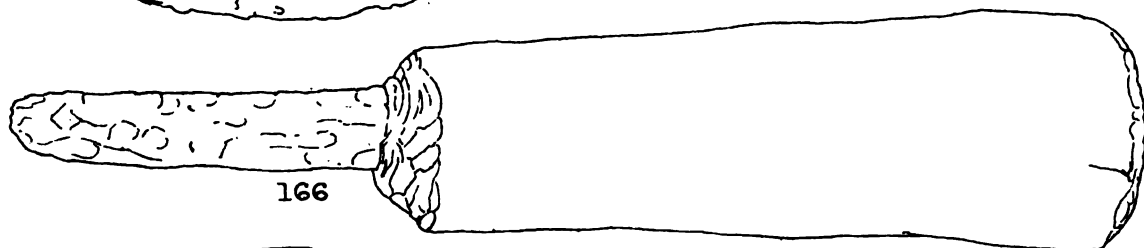
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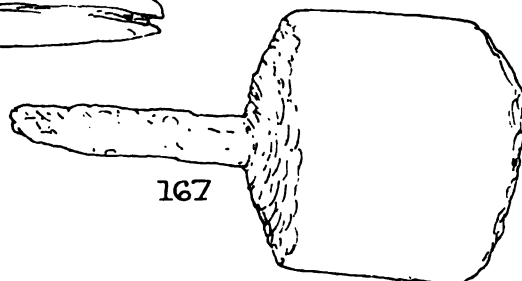
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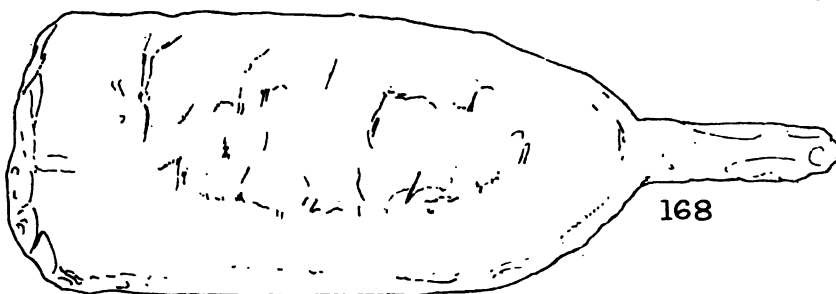
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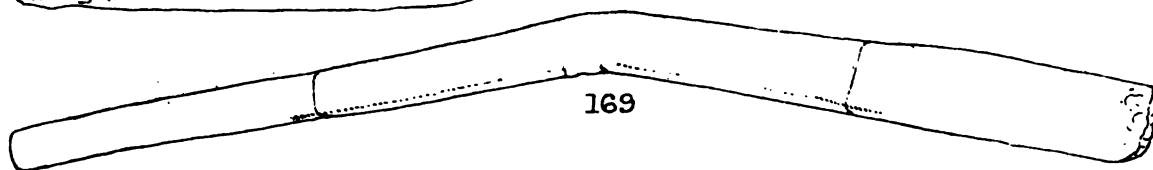
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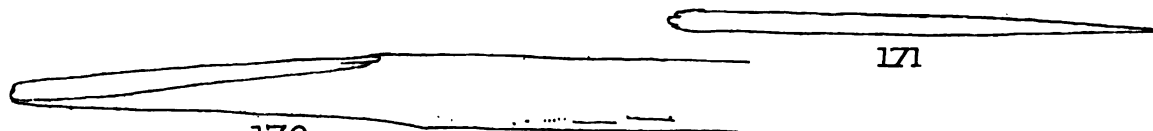
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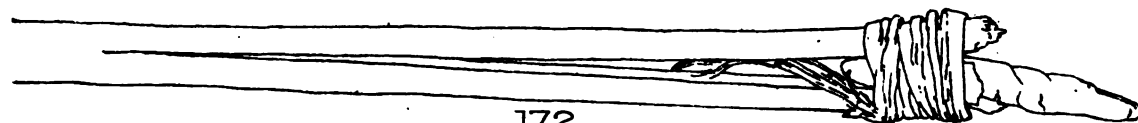
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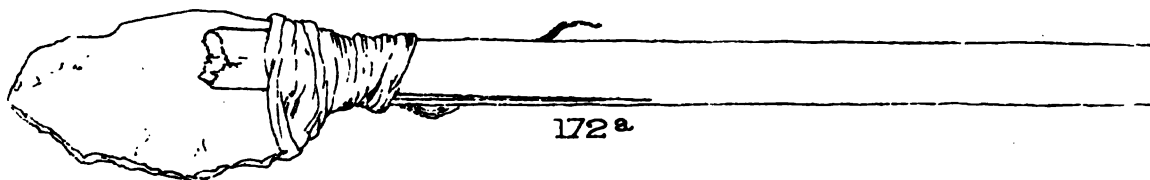
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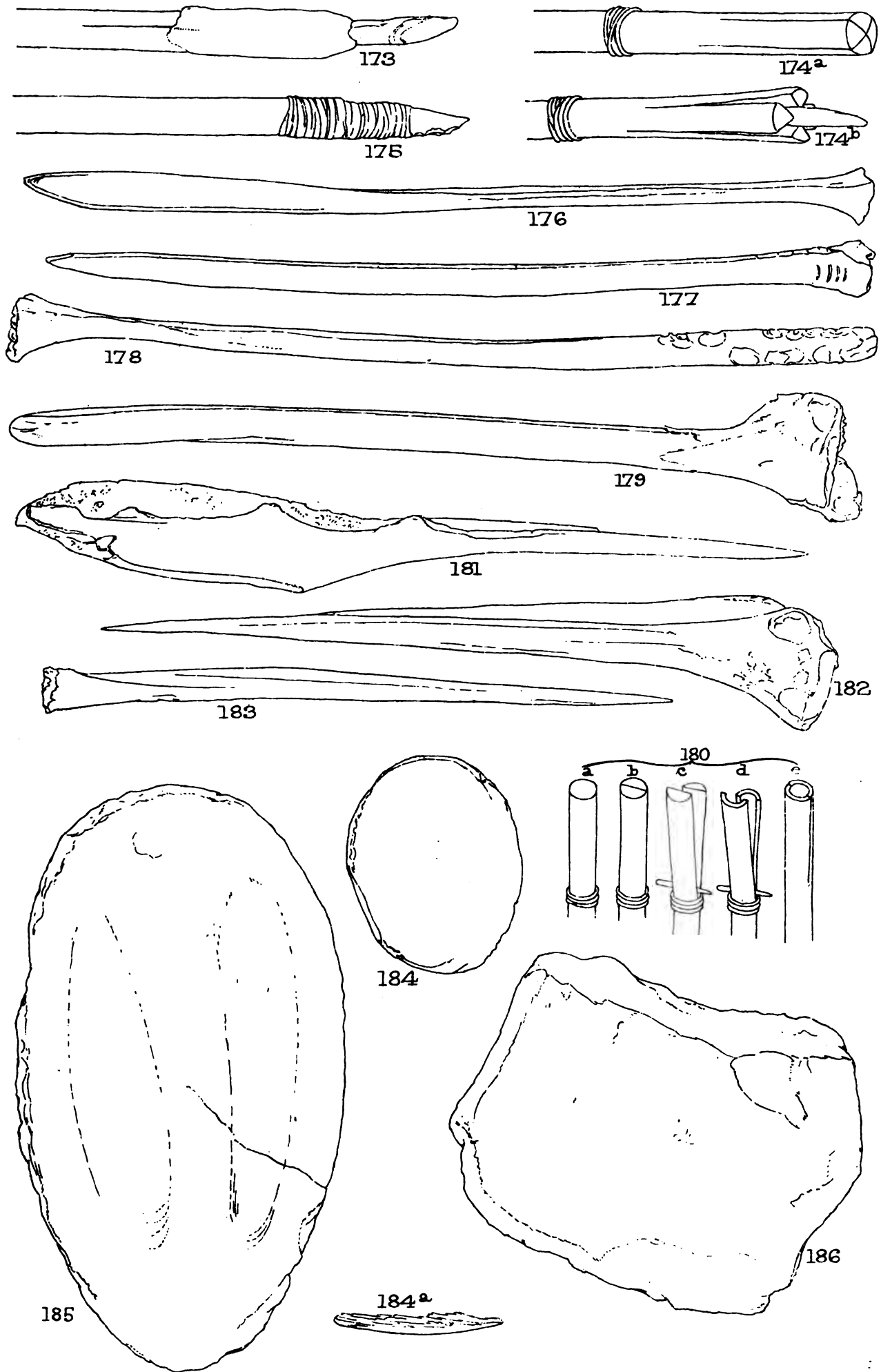
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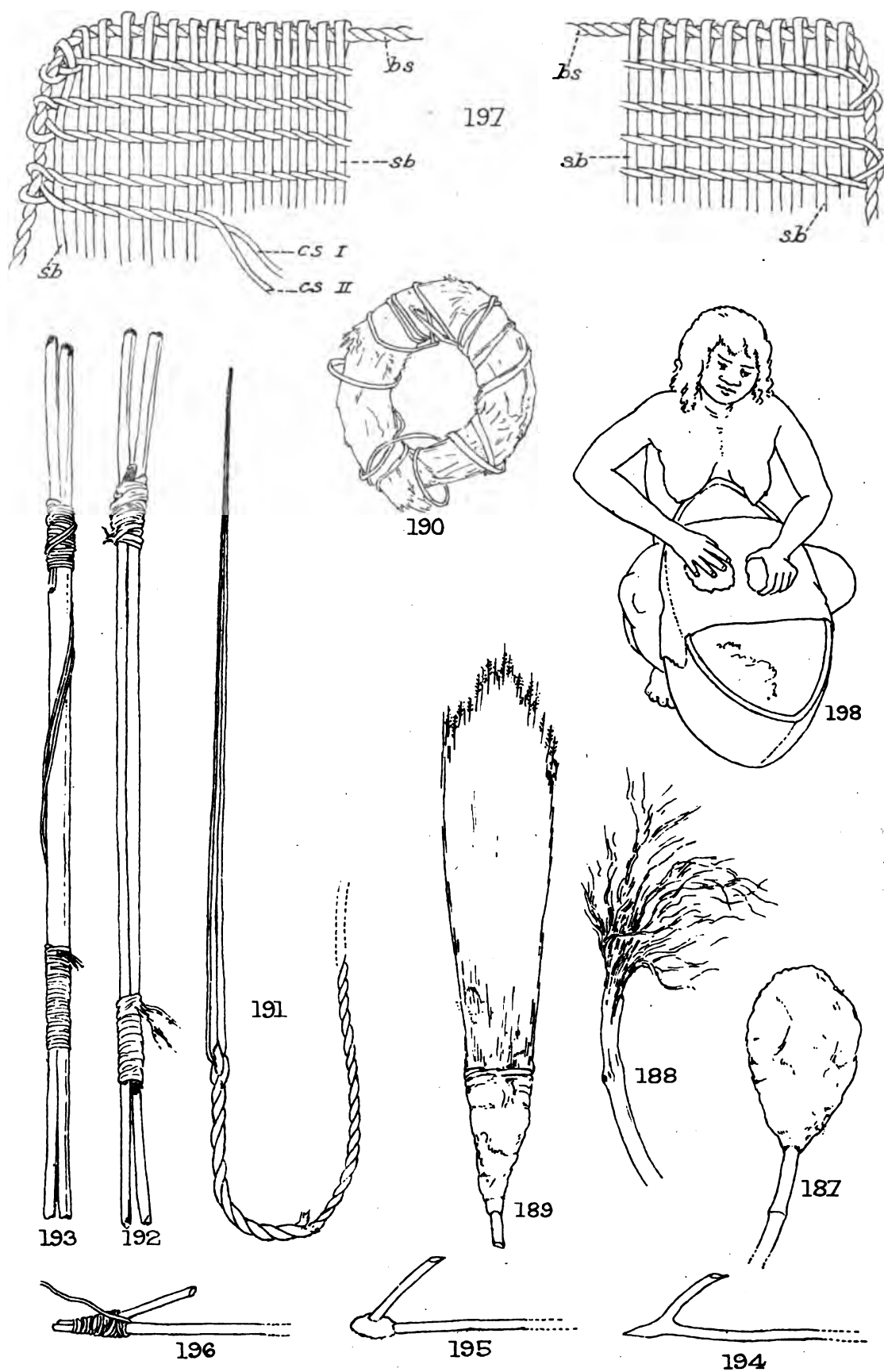
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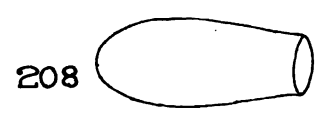
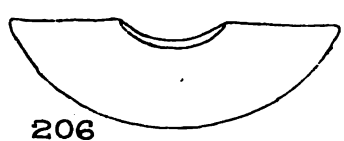
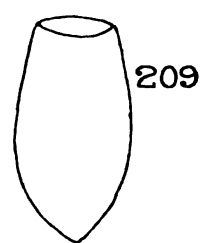
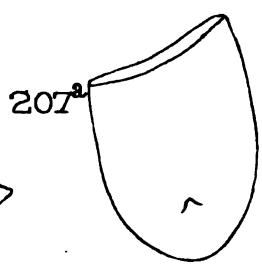
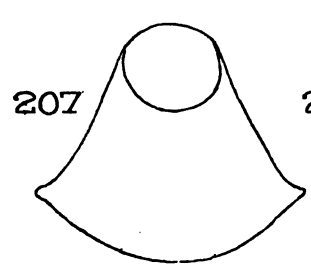
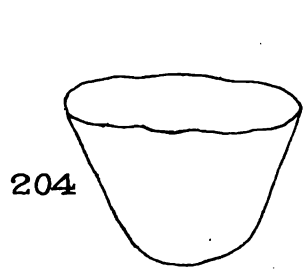
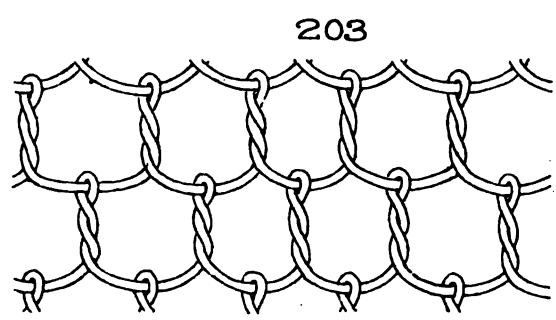
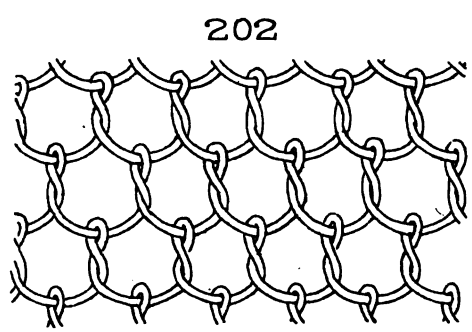
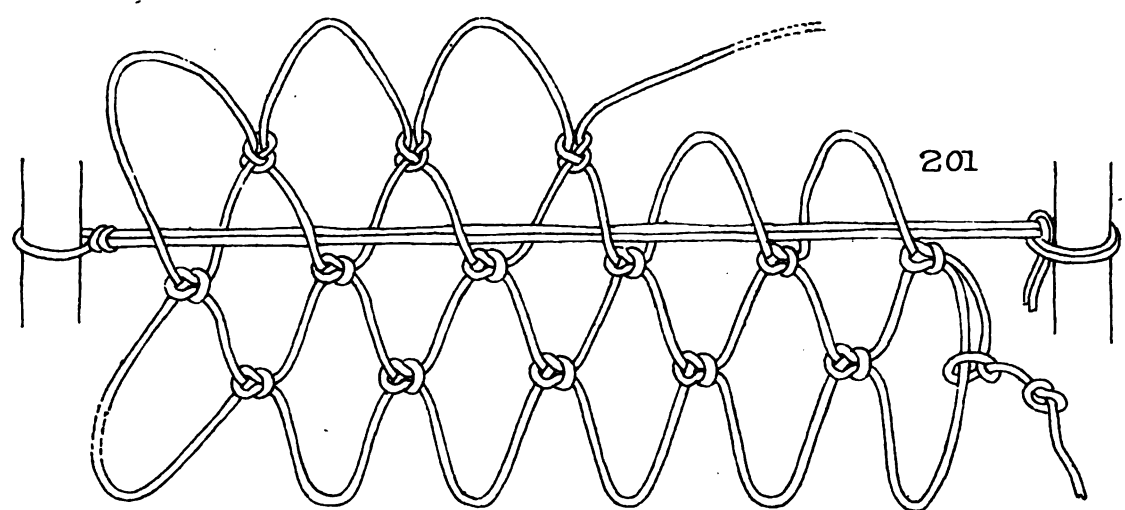
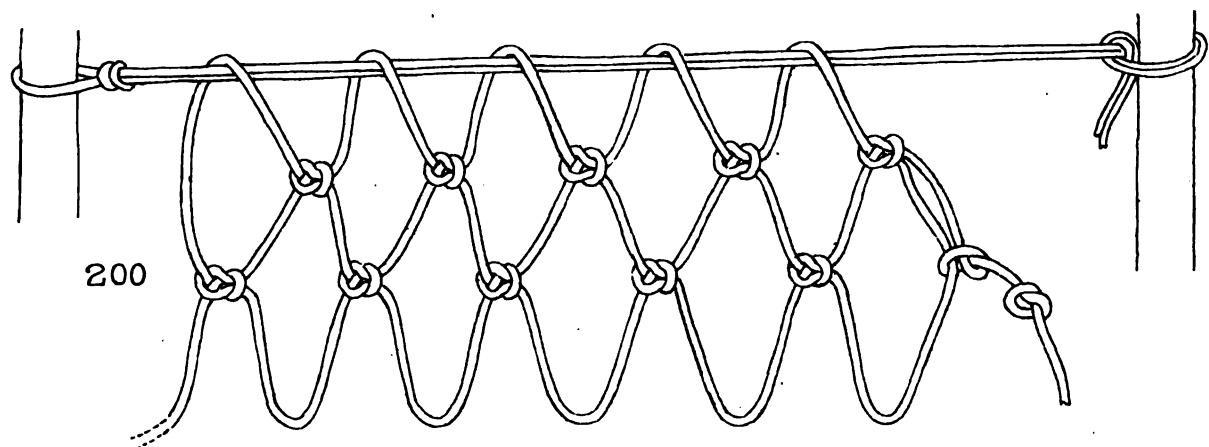
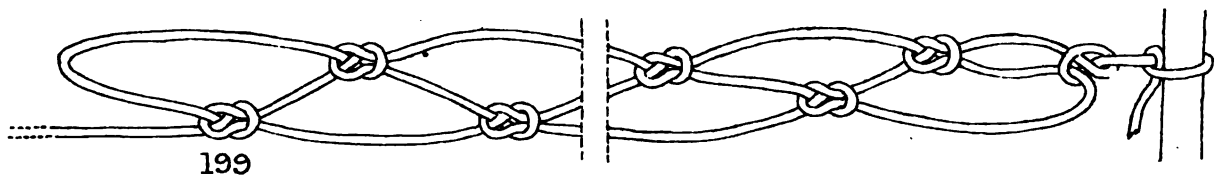
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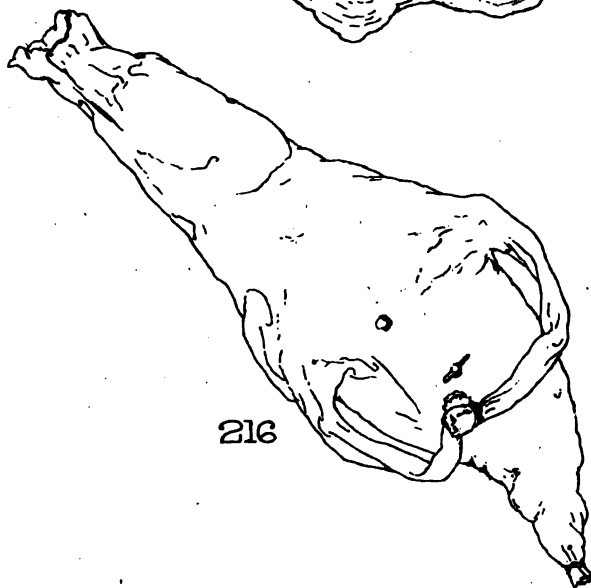
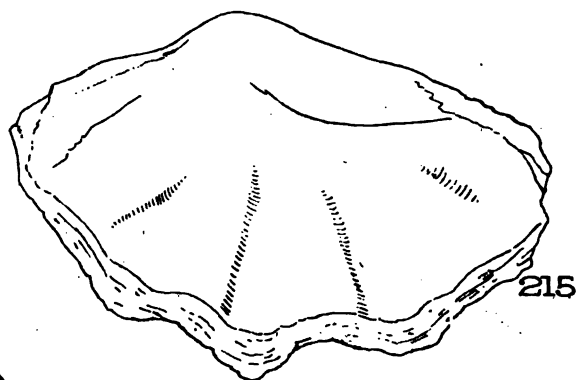
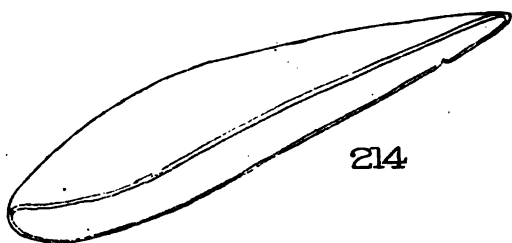
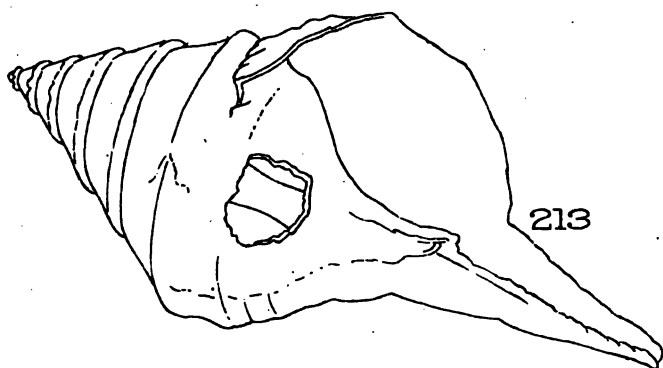
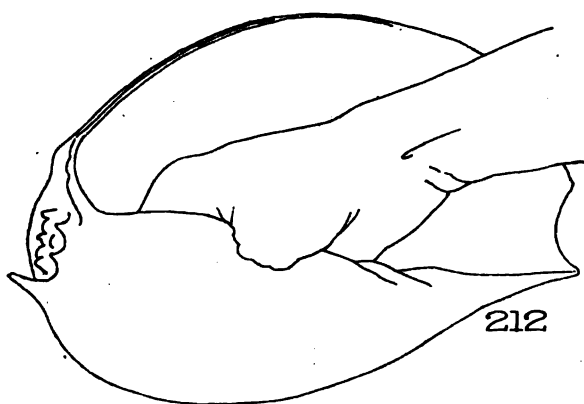
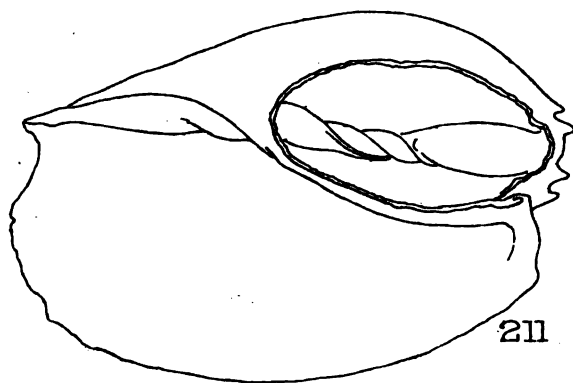
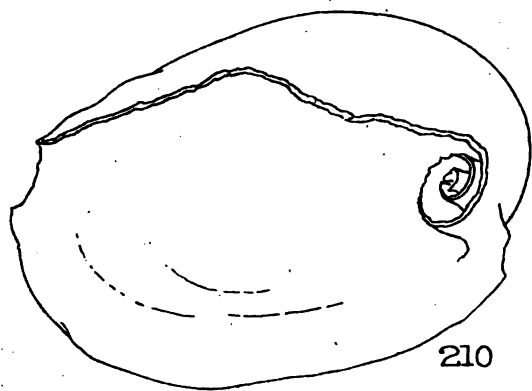
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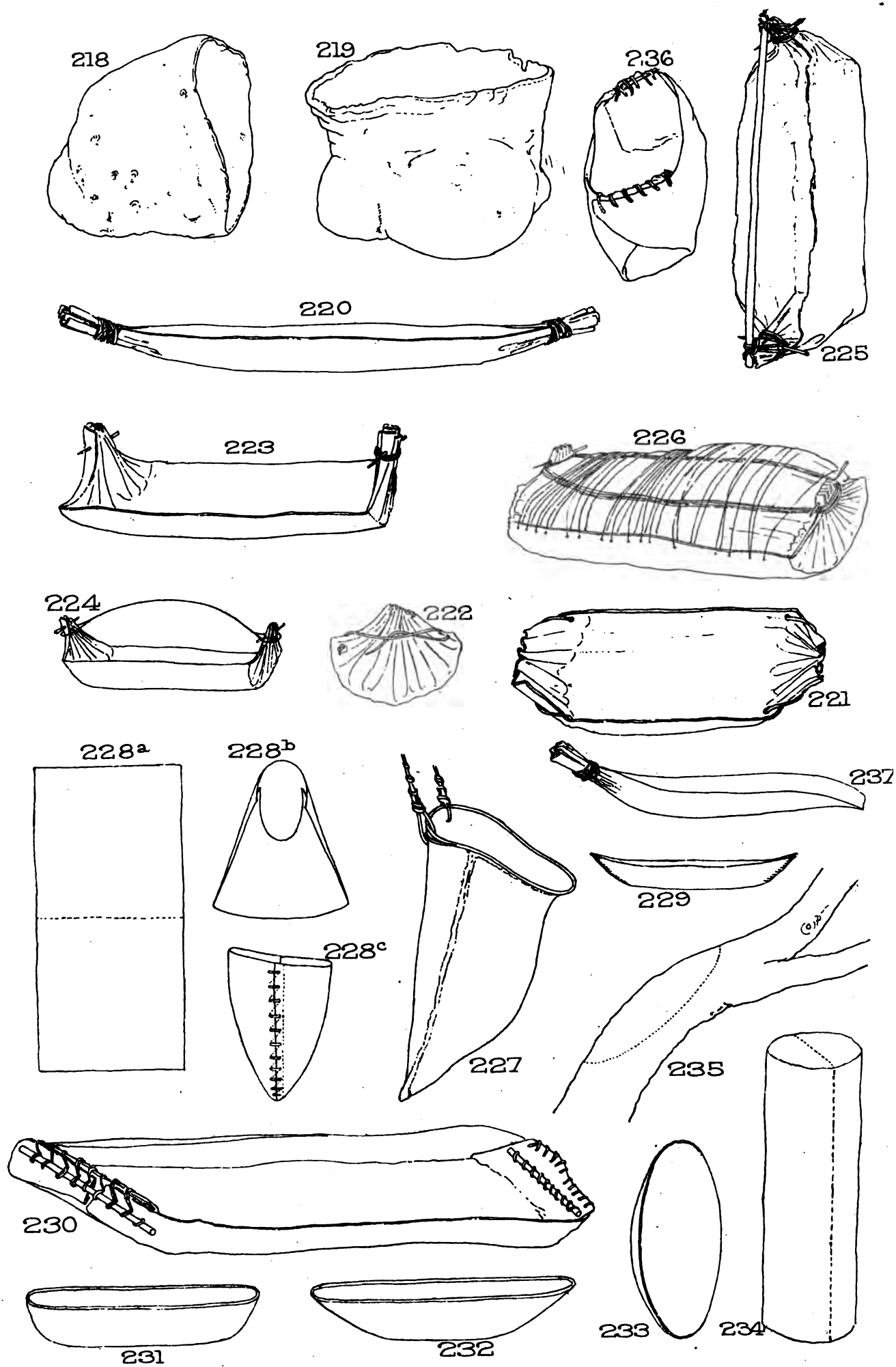
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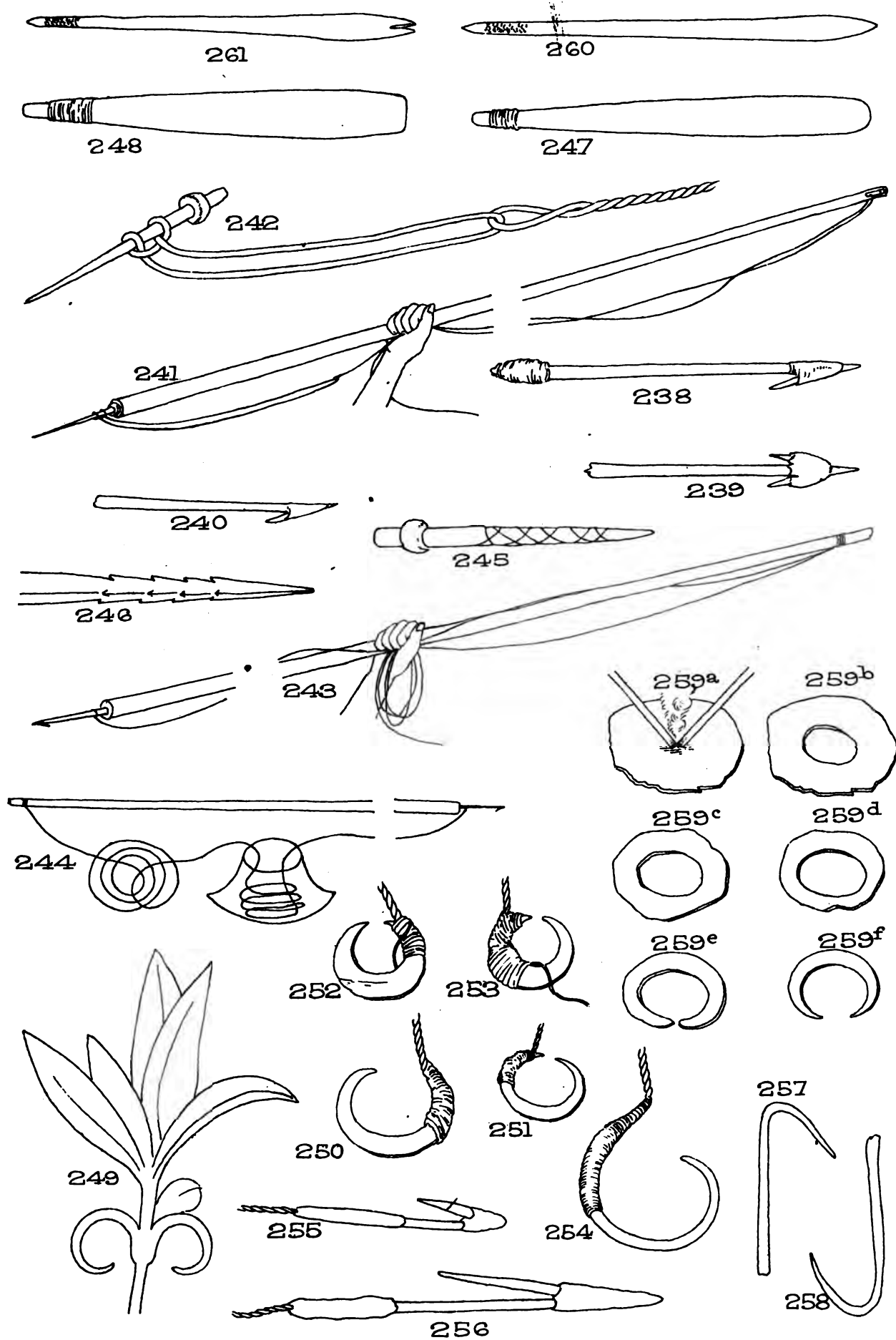
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NOTES
ON
GOVERNMENT, MORALS, AND CRIME,

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NOTES ON GOVERNMENT, MORALS, AND CRIME.

1. **The Assembly of Elders, Camp Council, Etc.**—The general government of the community is carried on by an assembly of elders, a camp council, as it were, of the elder males: not that this council has any fixed constitution or definite name applied to it, but by common consent it is accepted that all the older males take part in its deliberations which, after all, are more or less informal. Care is, of course, taken that no one of any importance is neglected, for, should such an one consider himself slighted, he might turn sulky and cause trouble. Age by itself is not necessarily deemed sufficient to raise an individual to the degree of importance necessary to give his opinions weight: fighting qualities, but especially social rank, as judged by the stages passed through at the initiation ceremonies, have a very great deal to do with it. The possession of many wives also gives a man social importance: more wives mean more relatives, and so a larger following. The very composition of this assembly of elders gives it its strength, and enables it to put its wishes into execution. The older women often have an important say in many matters, and occasionally the younger females (*e.g.*, on the Bloomfield) take part in the deliberations. Matters with which such a camp council concerns itself are those connected with the welfare and interests of the tribe collectively, and mainly relate to its external affairs, though events may take place in the home-life which call for interference. The question of peace or war would fall within its province, as well as the discussion of conditions for any proposed covenant. Covenants for the extermination of a common enemy may be made by two tribes, on the basis of settling existing differences between themselves, without having recourse to mutual bloodshed: it must, however, be admitted that these are not very binding, the number of fighting men among each respective ally or the common foe often breaking up the coalition at the first moment. The promiscuous use of fighting implements within the precincts of the camp is considered an offence against the tribe collectively: at Boulia, crippling, generally by knife, constitutes the penalty for this. Under no circumstances is fighting of any description allowed in camp at night: if people want to fight, they must go outside, and, when necessary, kindle fires to see by. Other affairs of state would include the reception of visitors and strangers, shifting of the camp, arrangements for trade and barter, and the exchange of songs and dances. When a medicine-man, &c., has been making too much rain, or practising witchcraft too promiscuously, or even one of their own tribesmen has been rendering himself so obnoxious as to inconvenience the tribe collectively, it is the camp council which takes action in removing the nuisance in more senses than one: on the Bloomfield, Kal-nga expresses such a mischievous and obstreperous individual, a real "bully," in fact. On the Tully River, where the punishment as often as not takes place on the "Prun"-ground (Bulletin No. 4, Sec. 15), the culprit meets his fate usually with the wooden sword, which is struck on the median vertical line of the head (almost split in two sometimes), while held with the assistance of others: or, again, he may be struck with this implement on the neck when asleep. While the assembly of elders will demand satisfaction for the killing of one of its number by an ex-tribesman, provided, of course, the number of its fighting men is adequate to enforce its demands, it will also interfere in the case of homicide or serious physical injury committed by one of its own tribesmen or tribeswomen on another. The settlement of private disputes is an individual concern, but any serious personal damage resulting is a tribal one: a sort of inquiry is held into the matter of justification for the injuries inflicted. The offender, for instance, has to show that he was within his rights, that the individual whom he had recently taken upon himself to punish had assaulted his woman, given him the "bone" (Bulletin No. 5, Sec. 136), or wrought him some similarly flagrant wrong: under such circumstances, no further action is taken beyond his undergoing expiation (Sec. 13), when it is understood that he is forgiven absolutely so far as regards the matter under adjudication. But where the general opinion of the elders is that the grounds of complaint do not justify the injuries that were inflicted, the individual has to undergo exactly the same mutilations subsequently at the hands of the victim, or, if this be impossible, by certain of the latter's relatives, a retaliation by similar injury with similar weapons. If the injuries terminate fatally, the offender may thus be put to death, in addition to the previous degradation of digging his own and his victim's grave. It is only too true, however, that the camp council can be favourably influenced by friends and presents, or inimically prejudiced by the offender's previous conduct, the opportunity being often taken to pay off old scores. Even if an innocent person defends himself, he must only give cut for cut, blow for blow, though, in view of the magic and superstition with which every action in one's ordinary daily life is surrounded, some real or imaginary reason is always forthcoming to put the hypothesis of innocence out of the question. Other matters with which the assembly of elders concerns itself are breaches of a sexual nature. For instance, it is a general rule that any intimacy between members belonging to non-exogamous groups is an offence punishable by death. In one case, on the Bloomfield, where the culprit whom the council's agents had attempted to spear, escaped, an effigy of him was made of some soft timber, and buried. So also, certainly in this district, the forcible taking away of a young girl against her parents' wishes is punishable with death by spear, the tribe collectively seeing to this.

2. The Rights and Powers of the Individual.—Natives regard the man according as he can hold his own in fighting and in hunting—*i.e.*, in proportion to the possession of those qualifications which enable him to overcome an adversary and ensure his success in the search for food. He has certain rights that he can exercise at his own sweet will, provided their execution coincides with the unwritten code enforced by the camp council, and conforms with certain accepted rules of conduct, varying sometimes between wide limits in different areas. He commences to take responsibility on his own shoulders so soon as he has undergone the necessary initiation stage. Young children, though certainly reprov'd, are but rarely if ever slapped or beaten; this is especially the case with the boys, who it is considered would thus develop effeminacy. Patience, however, may be sometimes exhausted, and the child perhaps stunned by the blow. When found fault with, it is generally for their impudence—either in not answering their elders properly or in referring to matters that it is not their business to speak about. A child may be killed for some crime committed by its parents or relatives, blood- or group-: how this principle may clash with European ideas is evidenced in the case of the so-called murder committed some eight or ten years ago on a little boy at Cardwell, for which crime "Julius Cæsar" is now serving a sentence at St. Helena Penal Establishment.

For infidelity, the husband or his brothers may publicly ridicule, maim, or even kill the wife. The methods adopted for exposing her to ridicule vary somewhat in different districts, from a public slanging to cutting her life-size effigy upside down upon a tree (Cape Bedford: Bulletin No. 5, Sec. 128), or painting a more or less crude representation of her upon a bull-roarer (Bloomfield). Maiming includes striking with boomerang, wommera, or anything else handy, spearing in the thigh or calf, cutting the ham-strings (Boulia), or flaying her alive when notoriously unfaithful (Bloomfield). At Miriam Vale, in the old days, the poor unfortunate, while held on the ground, would have hot ashes heaped upon, or rubbed into, her stomach (*C. E. Roe*). If the woman be killed, the husband may be called to account by, and may have to fight with, one or other of her relatives, blood- and group- brothers; sometimes (Boulia) he may be forced to deliver up one of his own sisters to be dealt with in similar fashion. Should the wife run away with her lover, it is the husband, or, more often, his blood- and group- brothers who bring her back: she may be violated lawfully by any of these assistants on the homeward journey, in addition to any chastisement to be subsequently inflicted upon her by her spouse. Her betrayer either keeps out of the injured husband's reach by running away for a while, or else fights him, the choice of procedure mainly depending upon whether he is the weaker man of the two or not. In the former case, he will remain absent for a month or two, or until such time as he considers sufficient for the husband's anger to abate, and will then come and receive punishment, a blow on the head, &c., followed (in the Bloomfield River, Endeavour River, and Prince Charlotte Bay districts) by the throwing over him of the spears—the sign of forgiveness and expiation (Sec. 13). In the latter, the fighting is either immediate or else reserved for the next meeting at the Prun-ground: at any rate, no killing is allowed, though serious injuries may result, especially when lighted fire-sticks, as on the Tully River, are brought into requisition. In cases where the innocent wife has been violated without her consent, the ravisher is more severely dealt with (Section. 10). The husband has the right to loan, exchange, sell, or divorce his wife, who has no reciprocal powers: he can kill her if he likes, though for such an outrage he may be called to account by her relatives.

The lives of the children (boys and girls) are absolutely in the hands of the father or father's eldest brother, without its being anyone's right or duty to condemn him. He may chastise his son in any and every manner he chooses, prior to the latter undergoing the initiation ceremony qualifying him for the responsibility of manhood, and may even do it subsequently, though the punishment is then generally meted out by the culprit's mother's brothers. He has been known to strike his boy with boomerang or wommera for deserting him—*i.e.*, for leaving camp too long without permission, for gallivanting around with the wife or daughter of any of his friends, for bad temper, or for throwing spears, after warning, to the common danger: that such chastisement is in grim earnest may be judged from the fact that a broken bone is of not uncommon occurrence. With regard to his daughter, it is the father's or father's eldest brother's, or her own elder brother's business to pin her down when, for being guilty of adultery, she is speared in thigh or leg by her husband's group- and blood- brothers. The father's duty is to keep the family supplied with meat food (larger game and fish), or, rather, those portions of it which he does not want himself: the mother keeps it in yams, roots, grass-seed, fruits, molluscs, and often smaller fish. On their peregrinations, the father walks ahead with the fighting weapons only: the mother, bowed down with all the domestic impedimenta, in addition to an infant on her shoulder, perhaps another on her hip, follows at some considerable distance. A mother may lawfully kill her child, within a few hours after birth, especially if the pregnancy or confinement has caused her more than ordinary pain and trouble: she usually puts her infant out of the way by pressing her foot upon its chest. Half-caste and deformed children are thus similarly got rid of. Nevertheless, be it said to her credit, in cases of illness, the major portion of the duties attendant upon the nursing of the sick devolves upon the mother, blood- or group-, no matter the sex of the patient: considering the circumstances, she invariably carries these out faithfully and well.

On three occasions (Princess Charlotte Bay, McDonnell, and Bentinck Island) at considerable distances from the nearest camps, I have met with groups of young girls, half a dozen or more in number, in charge of and apparently guarded by a very old man. Owing to want of interpreters, no satisfactory

explanation of the underlying circumstances was forthcoming, though, on the authority of reliable Europeans, it would seem that the practice is common in the Cape York Peninsula, but for what length of time, purpose, or reason is not known.

3. Rules of Conduct. The Relation of the Sexes.— Unless they should happen to be betrothed, women are allowed considerable sexual freedom before marriage: even if betrothed, it does not follow that her future husband makes any trouble over it with her, though a slanging match often ensues between him and the other interested party. After all, morality in its broadest sense is certainly a recognised virtue. A prostitute, though her frailty is usually due to the death or desertion of her husband, is despised, and has a special name applied to her—*e.g.*, she is known as Kanja-ikan-ikan (MAL., Tully River), chibai or tarpar (Cape Grafton), r-rúa (KWA., Princess Charlotte Bay). Strange as it may appear amongst an otherwise untutored race, the man who habitually consorts with such a woman is similarly regarded with contempt, and spoken of under a distinct term: gi-ru (Cape Grafton), chi-ngu (Tully River) a word also applied to a sodomist, gorojir (Princess Charlotte Bay) as well as a man who is always running after other people's wives, ku-lai (Bloomfield River) as opposed to a good and virtuous person, one who never interferes with women.

4. Obscenity.— On the Tully River, a husband, during the absence of his wife, has bestial rights over her younger brothers, but such conduct is despised. In the same district, and, I have reason now to believe, elsewhere, masturbation is practised even by married men, the method of excitation adopted being similar to the procedure followed with the vertical fire-stick: inquiries regarding the light in which the vice is regarded by the community as a whole have proved unsatisfactory. On the Bloomfield, unnatural offences, including criminal assaults on children, are unknown (*R. Hislop*). Bad language, in the sense of obscenity, is made use of in times of passion and malice, but it is noteworthy that the particular terms given utterance to under such circumstances are not identical with the words expressive of the same parts which are allowable in ordinary every-day conversation. A woman will rarely join in any filthy songs or stories indulged in by the men, and seldom converses upon any sexual matter except with other females. On the other hand, in times of quarrel, &c., she will give way to language of the most obscene character—the only method she can employ of showing her contempt—for the benefit of the man or men she may be angered with. On the Tully River, especially when others are present, she cannot publicly insult an individual more than by drawing attention to his alleged large amount of semen, such qualification being regarded as a grave disadvantage: the belief here in conception having no relationship to cohabitation may possibly have something to do with this idea.

There are a few rules of decency, breach of which constitutes insult, derision, or contempt. In either sex, the fundament must never be exhibited: micturition and defæcation always take place more or less in private, the emunctories being covered with earth or sand. Except in those areas where introcison is practised, a man must never be seen with the preputium retracted: a woman with an enlarged clitoris (not at all an uncommon deformity in the Cardwell district) does her best to hide it. A young girl before attaining puberty, will almost invariably be seen wearing an apron-belt, to be discarded when the development of the pubic hair proves a sufficient covering. A woman has apparently no knowledge of her nudity, and will stand facing any male friend addressing her, but sideways while conversing with a stranger: when sitting in the thigh-open position, one heel is tucked well up into the crutch, whether in the presence of friend or stranger.

5. Laziness, Falsehood, Gluttony, Etc.— So far as laziness is concerned, it should be noted that in the natural state, a native is not really faulty in this respect—to get even a day's food for his or her family an aboriginal has to bring no inconsiderable amount of physical exertion into play. Generally speaking, laziness is not recognised, especially on the part of the older men: on the Bloomfield River, the failing is known as bai-jur. At Mapoon, the word indicative of laziness is identical with that for being unwell (*Rev. N. Hey*). Lying and slandering, except in regard to a non-tribesman, are dealt with only in proportion to the gravamen of the resulting consequences; unless this is very serious—*e.g.*, a fight with fatal termination, false news with the alarm of the whole camp—anything, from public ridicule to a cut across the mouth with a wommera, may be inflicted as punishment. Selfishness, gluttony, and cowardice are alike despised: at Cape Bedford the name for a dingo signifies the offspring of a coward, or, rather, the one whose mother is a coward (Bulletin No. 2, Sec. 8).

6. Respect for Old Age.— Old men in general get the best of everything, and are treated with respect: such an one will only have to say he requires so-and-so, water, &c., and any of the young men around will immediately set to and supply his wants. They not only get respect, but they command fear and obedience. An old woman, as a rule, receives but scant consideration, though she may be looked after by her sons when neglected by her husband, as is often the case when the latter has a plurality of wives, and all his attentions are bestowed upon the youngest or most recently acquired. When, however, unable to provide for herself, or too infirm to accompany her younger relatives and dependants on their journey, she may either be left behind to starve, or perhaps even put to death. *Rev. Hey*, on the Batavia River, mentions two cases of old women whom the blacks proposed burying alive: they were "no more good."

7. Treatment of Non-tribesmen.— Anything may be done to a non-tribesman, old or young, unless he is known as, or comes to see, a friend, the latter being held responsible for his good conduct. At the same time, if an offence is committed on him during his visit, the culprit may be called upon to answer

for his conduct by the victim's people, with the result that both camps may collectively be drawn into hostilities: it thus happens that whatever treatment is meted out to a non-tribesman depends in large measure upon the fighting strength of the latter's friends. At the same time, the general underlying principle appears to be that any one who is not a friend must be an enemy: to a friend, the native invariably shows every hospitality, the sincerest expression of which is the temporary loan of his wife. In the Endeavour River language (KYI.) a friend is known as dau-an.

8. Salutation.—To strangers on the road, or rather out in the bush, there are no salutations, recognition not being apparently made by either side, though each may take careful mental note of the other's bearing, accoutrements, and movements, in view of a very possible ambushade or other sign of hostility. Well knowing the penalty for trespass, a stranger generally makes every endeavour to keep himself well in the background. Should, however, an individual pass a friend on the journey, he might attract his attention by calling out "hu!" and, without saying anything corresponding to our "Good-day," &c., just ask a direct question as to where he was going, and so open the conversation. Hand-shaking is not known.

Embracing would appear to be the commonest form of welcome, especially with friends or relatives after a long absence, to be immediately succeeded by a wailing with the head lowered. It is no uncommon thing for the wailing to be transformed into actual crying, this being often accentuated by a self-inflicted blow on the head with any weapon handy: an extreme form of welcome by wife or mother on the return home of the long-lost husband or son. In the neighbourhood of Marlborough, among the Bauwiwarra blacks, I came across a woman who, for very joy, on the occasion of her particular boy's return to camp after many months' absence, cut the top of her head with a tomahawk, let the blood pour down over her face, then just smear it off, and daub the wound over with mud.

Kissing is fairly rare, osculation being rather in the form of a rough blowing. On the Endeavour and Bloomfield Rivers, during the caresses of their parents, infants may be thus kissed on the mouth or back of the shoulders. At Cape Grafton a common greeting is a blowing on both cheeks. On the Tully, a man may be kissed by a female relative on his return after a long absence, this being usually on the cheek, forehead, head: men here, as a rule, only kiss men.

Even on entering camp, a good deal of formality is gone through. At Cape Bedford, if a tribesman return to his own people, even after a few days' absence, from some hunting expedition, &c., he does not enter camp, but sits down at some little distance away until such time as one of the old men may come to meet him. The latter, approaching slowly, stands at his side, but asks no questions: silence is maintained for a while, until finally the wanderer gives him all the latest news in an undertone. Then only does the elder vouchsafe to speak, repeating aloud, for the benefit of the camp, either word for word or sentence for sentence, the information which has just been brought. Only when this is completed does the new-comer enter camp as a right. A similar procedure takes place in regard to a stranger, who at last will be asked in by one who happens to know him (*Rev. Schwarz*). At Cape Grafton, say that some young men are returning after a long absence, they will sit down at some distance away from camp. After a time, an old man will come out and lead them in, they following in "Indian file." When about half-way, some old woman will meet them, and, dancing with bushes in her hands, will follow close in the rear. When in close proximity to the camp, the men will shout, clash their spears and shields, stop, shout again, and finally enter. On other occasions they may be met by several old men, who come out specially to receive them, clash shields with them, and then all enter quietly (*Rev. E. R. Gribble*). So, again, on the Tully River, supposing a man returns home after a lengthy absence, he stands back, with foot raised on opposite knee, maintaining his balance with a spear, and thus remains for some half-hour or so, until invited in by the old men or old women (*E. Brooke*).

9. Trespass. Inheritance.—Independently of the greater or less extent of country over which the community as a whole has the right to hunt and roam (Cape Bedford, Bloomfield River, Cairns hinterland, &c.) there are definite territorial divisions, certain tracts of country for each family, each such tract bearing a distinctive name. In the same way as a European knows what vegetables, shrubs, or flowers are growing in his garden, so do the natives have a very fair idea of the amount and whereabouts of any special growth of edible roots, fruits, and seeds, as well as the particular haunts of the various animals and birds found on their own particular piece of ground. For one family or individual to obtain vegetable, fowl, or meat without permission upon the land belonging to another family, constitutes trespass and merits punishment. This, however, is usually not of a very serious character, unless a non-tribesman is concerned: a slanging match, with both parties indulging in obscene epithets (Bloomfield River), or a spearing in the leg (Cape Bedford). Trespass is, after all, but rarely committed, considering that, on account of their very hospitality when one family experiences a superabundance of food of any description, its friends and neighbours are generally invited to come and partake of it. For a non-tribesman to trespass means death, and the risks run on occasion are enormous. The most remarkable instance known to me of a boy getting through in safety was the case of Joe, whose haunts were in the neighbourhood between McDonnell and Moreton Telegraph Stations, high up in the Peninsula, and who was deported in connection with a murder case to Fraser Island towards the latter end of September, 1902, whence he escaped about five months later, and got back home overland, a journey of at least 800 miles, in under six months: he could hardly speak a word of English, and necessarily had to pass through tribe after tribe, and country all foreign to him, he originally having been taken down by steamer from Thursday Island.

As far as can be ascertained, inheritance in land passes through the blood-brothers and blood-sons, who claim it conjointly, the last survivors of these ultimately owning it, whence it passes through their blood-sons and blood-sons' blood-sons conjointly again. It thus happens that land is retained from generation to generation in the same two exogamous groups. The only instance known to me of women holding what might almost be called real estate is on the Bloomfield, where the patches of *zamia* plants (edible) are apportioned amongst the females, each woman bequeathing her lot to her daughters or other female relatives. On the death of an individual, his brothers get the spears, wives, and other property of the deceased, the eldest surviving blood-brother having first claim.

10. Crimes against the Person.—The conditions under which homicide is excusable and justified have already been alluded to (Sec. 1). One or two cases of undoubted suicide, by throwing themselves headlong down an embankment into the water have been reported from the Bloomfield (*R. Hislop*), but the victims appear to have been considered "cranky" by their friends. The Thanatomania referred to in Bulletin No. 5, Sec. 113, may be regarded as a passive, rather than an active, form of suicide. Extreme variations are to be noted in the light with which rape is regarded. On the Bloomfield, the offence is recognised and punished by death, speared by the husband or mother's brother, or friends collectively: occasionally the offender may be spared his life, though severely maimed, when happening to have powerful friends (*R. Hislop*). At Cape Bedford, the ravisher is speared (but not unto death), or cut with a wommera, the punishment being inflicted by the woman's betrothed or actual husband (*Rev. Schwarz*). On the Tully River, the condition of affairs is such that rape is not interfered with, unless the actual or betrothed husband chooses to consider himself aggrieved: here also, nothing is thought of elder men, provided they belong to the suitable marriageable group, tampering with any young girls, quite young children being actually handed over to the old men with a view to their being "broken in" (*E. Brooke*).

11. Crimes against Property.—Theft and fraud can hardly be reckoned as crimes, the view generally taken being that it is the victim's own fault for allowing himself to be robbed or cheated, especially if the offender remains undiscovered. And even when the culprit is known, he will as often as not come forward to express contrition, and, with a promise not to do it again, duck his head to receive a blow, and thus settle things amicably at once (Bloomfield). At other times a fight may result, the two men perhaps resorting to maiming, but in such cases the victor may have to show cause before the camp council. Among the women, the mutual recriminations may lead to them pelting each other with sticks or stones. If the theft or fraud involves serious consequences, the culprit (on the Bloomfield) may be struck with a wommera or held up to public ridicule, the punishment being carried out by the father, blood- or group-brother of the individual victimised. Public ridicule is effected by painting an effigy of the offender on a large variety of "bull-roarer," and hanging it up on a tree patent to the gaze of all. In this same district, so far as setting fire to each other's huts or property is concerned, the males appear to be the worse offenders. The commonest wilful damage committed by men is the breaking of other people's spears. This is generally the result of the offender being neglected when he had the right to expect it—i.e., when returning home late, or after a hunting expedition, and not being offered some food.

12. Property-marks. The so-called "Letter-" or "Message-sticks." At Boulia, when a black proposes leaving camp for a few days, and is unwilling to take with him all his belongings, little enough though they are, he will go to some neighbouring spot, not too ordinarily frequented, leave them there, and on the soft ground around clear a circular space, upon an extra well-smoothed portion of which he will place an imprint of his foot: this impress being well known to his friends, he can rest assured that the property will remain intact during his absence.

In the neighbourhood of the Pennefather River, a tussock or two of grass may be tied round the butt of a tree containing honey, the finder not having the leisure, &c., to cut it out on that particular occasion: no one else will touch it now. Pandanus leaves are similarly used at Cape Bedford. So also in the Pennefather district, the discoverer of an immature pod of the "match-box" bean (*Entada scandens*, Benth.) will bind it around in similar fashion, and claim it when ripe.

The limited quantity and portability of a native's personal goods offer little or no opportunity for the use of property-marks. If weapons are of the same cut, there are minute, yet sufficient, differences which are recognisable to the owners: even if similarly ornamented, no two are so alike that they cannot be distinguished. In a general way, each having sufficient for his own wants, and no person having more than another, there is nothing to steal, and hence, as already mentioned, the levity with which theft, even when it occurs, is regarded. Only in cases of trade and barter, through an intermediary, where it is essential that one individual's goods should be distinguished from another's, is there a necessity for a definite property-mark, this taking the form of a so-called "letter-" or "message-stick" (Plates I. to IV.). Under such circumstances, the "stick" may be put into use as follows:—Charlie, residing at Boulia, wants, we will say, some pituri (*Duboisia hopwoodii*, F. v. M.), but being prevented by sickness or some other cause, from going himself, sends some relative or friend Peter, to the nearest market, on the Mulligan River, to get some for him, and gives him a "message-stick." Arrived at last at his destination, Peter is asked his business, tells who has sent him, hands over the "stick," and establishes his *bona fides*. The bagful of pituri being at last forthcoming, the vendor returns the "stick" to Peter, but not before taking careful mental note of it, so as to be sure of recognising it again. Peter returns at last to Charlie at Boulia, and delivers up both pituri and stick. It now remains for Charlie to pay for the pituri with

spears, boomerangs, &c. If he can prevail on Peter to take a second trip, all well and good, but if not, as is usually the case with so long a journey, he either proceeds himself or sends another messenger with the goods and the identical "message-stick" as before. He, or the second messenger, arriving at the Mulligan, finds the vendor, and gives him the spears, boomerangs, &c., together with the "stick." Recognising the latter, the seller accepts the various articles in payment for the bagful of pituri which he parted with some few weeks previously, knowing now that he has been paid by the right person, probably personally unknown to him—i.e., the sender of the original "stick."

I am absolutely convinced that the marks on the so-called letter- or message-sticks do not convey the slightest intimation of any communication, in the ordinarily accepted sense of the term, from sender to receiver: this view is based mainly on the grounds that the same message may accompany different sticks, the same stick may accompany different messages, and the stick may bear no marks at all. I have been given a stick to take with a certain message to another district, and purposely mislaid it temporarily, in order to secure another specimen: the sticks are not alike (Plate IV., Figs. 2, 6). Again, "second-hand" sticks may be used over and over again by strangers, who certainly have had no knowledge of the original manufacturers. Sometimes a broken twig is sufficient, without any incisions whatever, and I have often seen a piece of tea-tree bark, or even a rag, just tied round and round with twine, to constitute the so-called letter. To put the matter plainly, the message is taken verbally, the stick serving only to accentuate the *bona fides* of the messenger: if the messenger is known to both parties, no stick is sent. On the other hand, there is a more or less uniformity recognisable in the shape of the sticks manufactured in different areas: the flat feather-shape of the Boulia district bears a strong contrast to the squared form of the letters met further North. Occasionally, the stick may be affixed with twine to a handle, carried vertically in front, and the suggestion has been offered that this expedient is resorted to when the messenger is travelling through hostile country, so as to give him immunity for trespassing: my experience is that, under such circumstances, he would avoid any risk of being seen by travelling only at night. I have often seen a civilised black boy, on the road, holding in front of him a short twig, in the split extremity of which an envelope, &c., has been inserted: at a distance it resembles a flag somewhat.

13. Expiation.—Where the crime committed does not by universal consent demand the punishment of death, it can be expiated by the culprit voluntarily submitting himself to the penalty due, which, under such circumstances, and with time's soothing agency on the angered passions, is usually minimised. If the offender, for instance, has been taking liberties with another man's wife, he may submit the top of his head to a blow of a wommera (Bloomfield), or may offer his thumb to be bitten by the injured husband (Headingly): if he has been tale-bearing or scandal-mongering, he lets his mouth be struck by the individual slandered: if he has been throwing spears when he ought not to, he submits the back of his elbow to be cut with a wommera (Bloomfield). Women can only expiate crimes amongst their own sex, usually by a blow on the head with a club or waddy. On the Keppels, I was a witness to this principle of preventing further misunderstanding, and so nipping in the bud what might otherwise have proved a serious quarrel, and saw a woman who had accidentally cut one of her neighbour's hands deliberately inflict a similar injury on her own. In the case of men, however, the offence committed may have far-reaching effects, in that the whole family, and not one person only, may be affected. In such a case the culprit, probably deeming that discretion is the better part of valour, will "retire" from camp for a few days with his friends, and then send in some old woman to find out exactly how the land lies, and who and how many there are that bear him ill-will. Having learnt this, he comes back at last, and calls upon them one by one to throw a spear either over or at him, though oftentimes the individuals so called upon will be content to give him a sound talking-to. On the Pennefather River, the spear is stuck direct into the fleshy part of the back of the thigh. At any rate, the spears having once been thrown, he rests content in the knowledge, which the community recognise and uphold, that certainly for that particular offence he can expect no further hurt or harm at the hands of the throwers—the forgiveness is complete. This throwing of the spears at or over the offender is practised over a very wide area of country—it is known to take place along the coast line from Cape Grafton to north of Princess Charlotte Bay, as well as its hinterland, also on the Palmer, and in portions of the Cape York Peninsula. According to the district, he may be allowed a wommera or a shield to defend himself with, and occasionally a brother or other near relative will stand on either side of him and lend assistance. He may thus be exposed to the fury of his assailants from a few minutes to as much as perhaps a couple of hours, though the mental strain and excitement under which he is labouring for so comparatively long a period often puts him off his guard, and he succumbs to the injuries received. Of course, whether he gets off scot free or not depends in large measure upon his previous conduct, the number of his friends at court, and the nature of the offence: if this should merit death, he is prepared to meet it as a man should, and bows with dignity to the inevitable.

Throughout North Queensland there is a form of expiation in the way of confession of sins upon the return of an individual to camp after a prolonged absence. Under such circumstances, the boy may come and sit beside his wife, but neither will speak for some time, this varying from a good quarter of an hour or so at Headingly, to upwards of an hour on the Tully River: they thus remain silent, each expecting to hear of the other's delinquencies which it is taken for granted have occurred during the *interim*. If a clean breast of it is made there and then on either side, all well and good; but should anything be discovered afterwards, there is certain to be a row.

Detailed Description of So-called "Letter-" or "Message-" Sticks.

(PLATES I. TO IV.)

Plate I.

FIG. 1.—Oblong, flattened or compressed, slightly bi-convex, feather-edged, section long-oval, ends truncate; dark wood. Both faces bear a series of sixteen transverse incisions, leaving a central plain panel bearing a Greek cross. Length, 4 in.; width, 1 in.

Ku, made by a Morehead River boy.

FIG. 2.—Oblong, flattened or compressed, plano-convex, edges sub-acute and bearing obtuse notches, ends angular or roof-shaped. Both faces bear faint longitudinal and transverse scratches, and widely extended zigzag lines. Length, 4½ in.; width, ½ in.

Whitsunday Island.

FIG. 3.—Round and bifid, evidently a small natural fork worked up; light-coloured wood. The butt and proximal portions of the legs bear transverse lenticular notches; on the former there are four series, one obverse, one reverse, and one at each side; on the latter are one obverse, one reverse, and one on the outer side of each only; the legs are terminated distally by button-shaped feet. Length, 5½ in.

Kalkadun Tribe (See "Ethnological Studies," 1897, pl. 18, f. 336A.)

FIG. 4.—Lanceolate, bi-convex, feather-edged; dark wood. Both faces bear the same style of incisions, consisting of three rhombs bounded by numerous lines, merely scratches, leaving triangles in the interspaces at the sides; the basal halves bear oblique nicks irregularly arranged. Length, 7½ in.; width, ½ in.

Boulia.

FIG. 5.—Oblong, narrow, baulk-shaped, square-sided, the obverse and reverse and the two sides equal to one another respectively, square ended. *Obverse*—With horizontal or slightly oblique transverse incisions. *Reverse* similar to the obverse. *Sides*—On one of the sides are oblique incisions crossing one another from right to left and left to right alternately, forming rhombs and marginal triangular spaces; in the middle line is a square panel with a St. Andrew's cross. On the other side is a similar arrangement of incisions, but the resulting rhombs more acutely drawn out, with two median square panels, one containing a "broad-arrow," or "emu footprint," and the other a St. Andrew's cross. Length, 5½ in.; breadth ½ in.

Bathurst Head.

FIG. 6.—Oblong, flattened or compressed, slightly bi-convex, feather-edged, ends rounded. *Obverse*—With a transverse median incision, and a longitudinal serpentine or zigzag figure formed throughout of three subparallel lines, the angles either obtuse or acute; in one of the re-entrant spaces is the letter T, and in another the letter R. *Reverse* bears both a longitudinal median and a transverse median incision, with proceeding from the former very many curved incisions on each side. Length, 4½ in.; breadth, 1½ in.

Ku, made by a Morehead River boy.

Plate II.

FIG. 1.—Spindle-shaped, round, tapering at the apices; light-coloured wood. Incised all round but without a defined pattern, the marks consisting of crosses, transverse notches, and arched incisions subparallel to one another on the central line of the stick. Length, 4½ in.; diameter, ¾ in.

Carandotta. Sent by "Sandy," a Glenormiston boy at Carandotta, to "Kangaroo," of Roxburgh, asking the latter to bring *pituri* as soon as possible, the former having plenty of spears and boomerangs for exchange.

FIG. 2.—Cylindrical or ruler-shaped, with blunt apices, and an equal diameter throughout; light wood. The whole surface is very roughly incised throughout in rhombs by spiral incisions from right and left crossing at rather irregular distances; has apparently been blackened. Length, 4 in.; diameter, ½ in.

Boulia.

FIG. 3.—Cylindrical or ruler-shaped, thick, with blunt rounded apices, and the surface ruddled. Rather more than half the stick is incised with spiral lines as in Fig. 2, producing similar figures. The lower position of the stick is divided into three longitudinal zones by three continuous zigzag incisions, the interspaces between them

being partially infilled by short transverse incisions. Length, 5½ in.; diameter, ¾ in.

Atherton. Made by "Paddy," son of the headman of the Atherton Tribe, telling the other local tribes to come in.

FIG. 4.—Cylindrical or ruler-shaped, square-ended, ruddled. The whole surface is covered with small rhombs. Length, 5½ in.; diameter, 1 in.

Atherton.

FIG. 5.—Cylindrical or ruler-shaped, thick, square-ended; light wood. On the obverse only are eighteen transverse lenticular deep notches, in which the white wood is conspicuous in contrast to the dark exterior. Length, 6 in.; diameter, ¾ in.

Burketown.

FIG. 6.—Cylindrical or ruler-shaped, the apices bluntly rounded; dark wood. The whole surface is decorated with separate acute rhombs, their longitudinal diameter parallel to the length of the stick. Each rhomb is defined by a double line, and the centre occupied by a small nick. The rhombs, of which there are four or five in a series, as the case may be, are separated from one another in their respective lines by double transverse notches. At one end there are five rhombs following one another circumferentially, but as the longitudinal continuity of these figures is here and there broken, the other circumferential zones have either three or four rhombs. Length, 5½ in.; diameter, ¾ in.

Clump Point, Cardwell. (See "Ethnological Studies," 1897, pl. 18, f. 334.)

FIG. 7.—Cylindrical or ruler-shaped, slightly bent, unequally round, blunt-ended, and irregularly incised with oblique short notches; light-coloured wood, apparently at one time blackened. Length, 4 in.; diameter, ½ in.

Cooktown, from a Kokowarra boy.

FIG. 8.—Cylindrical or ruler-shaped, short, round, blunt-ended; dark wood. Incised with parallel zigzag lines. Length, 3½ in.; diameter, ¾ in.

Normanton.

Plate III.

FIG. 1.—Oblong, thin, flattened, although very slightly bi-convex, edges obtuse, ends truncate; dark-coloured wood with ruddled surface. Both on the obverse and reverse is a curious cross-like figure, composed of oblique, slightly curved, sub-parallel incisions crossed by shorter transverse oblique lines, forming a chequered ornament to the arms of the cross. In the angle formed by two of the arms is an irregular rhomboidal figure. Length, 4½ in.; breadth, 2 in.

Cooktown. From a Morehead River gin at the Eight-mile, Cooktown, whose brother, "by these presents," had sent in word to say he was sick.

FIG. 2.—Oblong, thin, flattened, although very slightly bi-convex, edges obtuse and notched, ends truncate; highly ruddled. *Obverse*—Two central parallel longitudinal lines, the enclosed space imperfectly subdivided into squares by transverse notches, with, on each side, a continuous zigzag line. Above are four oblique, slightly curved incisions, and below four rudely semicircular cuts, bending in an opposite direction to those above. *Reverse*—Divided longitudinally by a central continuous incision from top to bottom, and transversely separated into three equal zones, the central of which has on each side the longitudinal dividing line a similar zigzag incision to those on the obverse, the upper and lower zones bearing numerous transverse sub-parallel cuts. Length, 5½ in.; breadth 1½ in.

Kalkadun Tribe. (See "Ethnological Studies," 1877, pl. 18, f. 335, obverse and reverse.)

FIG. 3.—Oblong, flat, compressed, edges obtuse, ends truncate; light-coloured wood. *Obverse*—Longitudinal and oblique transverse incisions, giving rise to a fish-scale pattern; above are two plume-like bodies formed by grouped longitudinal incisions, and on one margin a space bearing a serpentine or zigzag figure, the re-entrant spaces of which are occupied by dots. *Reverse*—The centre is occupied by an object resembling a *wet-net*, surrounded by six groups of radiating lines, three on either side; above is an object resembling a wheat-sheaf, or perhaps, to speak more correctly, the base of a palm frond springing from the petiole; below the central

figure are two groups of rhombs, one on either side. Length, $6\frac{1}{2}$ in.; breadth, $1\frac{1}{4}$ in.

Oorindimindi (Fullarton River). Made by a Boulia (*Pitta-Pitta*) boy, who ran away from his own people to avoid circumcision, &c., and sent this stick to Tracker "Billy," a *Maitakudi*, at Cloncurry, asking the latter for spears.

- FIG. 4.—Oblong, flat, compressed, square ended, cut down at one end to form a "tenon." *Obverse*—A triangular figure the base of which is formed by one lateral edge of the stick, the sides of the triangle by four lines meeting on the opposite edge of the implement; within the triangle is a small branch or tree shoot. *Reverse*—The incisions are confused and consist of notches and lines at different angles, with a central longitudinal, roughly-outlined, zigzag figure. On this aspect the end opposite to the "tenon" is cut out as a triangle similar to that seen at the bottom of Fig. 5. Length, 3 in.; breadth, $\frac{3}{8}$ in.

Half a stick given by a Morehead River gin at the Eight-mile, Cooktown.

- FIG. 5.—Similar to Fig. 4, but slightly smaller. *Obverse*—Three triangular spaces are countersunk, one at the lower end, and two lateral; above are five widely V-shaped incisions. *Reverse*—The greater portion of the surface is occupied by irregular rhombs and three triangular spaces, two infilled with V-shaped incisions, and the third with a small shrub.

Half a stick given by a Morehead River gin at the Eight-mile, Cooktown.

- FIG. 6.—Bâton-shaped, compressed, bi-convex, edges sharp, the proximal end handle-shaped, the distal excavate or fish-tail shaped. *Obverse*—The upper centre is occupied by a heart-shaped flower on a stalk with two leaves, and above it a panel occupied by a "St. Andrew's cross" of several lines; from the "flower" downwards are V-shaped incisions forming a herring-bone pattern. *Reverse*—Is occupied by a longitudinal festoon figure, the terminal portions of three incisions, one within the other, the two central loops of the festoon of four. Length, 6 in.; breadth, $\frac{3}{4}$ in.

Barclay Downs.

- FIG. 7.—Oblong, compressed, narrow, bi-convex, ends pointed; light wood, with blackened surface. *Obverse*—With oblique transverse deep notches becoming further apart towards the bottom of the stick, where they are crossed by a few notches in a contrary direction. Length, $6\frac{1}{2}$ in.; breadth, $\frac{3}{8}$ in.

Miorli Tribe, Boulia. (See "Ethnological Studies," 1897, pl. 18, f. 332.)

- FIG. 8.—Oblong, compressed, bi-convex, obtuse edges, truncate ends; light-coloured wood, with traces of blackening. Both obverse and reverse are divided into three unequal panels by transverse horizontal incisions passing continuously round the stick. *Obverse*—The upper and smaller panel contains a single rhomb described by five incisions on each of its sides. The middle panel has in its centre a kind of hour-glass shaped figure containing a "Greek cross" above, two transverse lines in the centre, and a "St. Andrew's cross," obliquely placed, below; this figure is surrounded by variously curved lines. The lower and largest panel contains oblique diverging lines above with an oblique longitudinal incision below reaching to the truncate end, and from which oblique incisions diverge from above downwards on each side to the lateral margins of the stick. *Reverse*—The upper panel has a rhomb as on the obverse, with two oblique short notches in the centre. The centre panel presents a slight modification of the hour-glass shaped figure seen on the obverse, but there are no contained figures. In the lower panel there is above a rhomb with four parallel transverse notches, and below the former similar oblique diverging incisions to those on the obverse, but cut from below upwards. Length, $4\frac{3}{4}$ in.; breadth $1\frac{3}{8}$ in.

Kalkadun Tribe, Cloncurry.

Plate IV.

- FIG. 1.—Cylindrical or ruler-shaped, but slightly quadrangular, blunt ended; soft light wood. Each of the four faces deeply and widely transversely notched. Length, $6\frac{1}{2}$ in.; diameter, $\frac{1}{16}$ in.

Mapoon, Batavia River.

- FIG. 2.—Oblong, compressed, flat, edges obtuse, ends obtusely sub-angular. *Obverse*—Above an oblique "St. Andrew's

cross," followed by a laterally reversed M; next a chequered panel; then a panel with four longitudinal incisions, succeeded by one with five transverse incisions, completed by a long basal panel with laterally reversed W N. *Reverse*—Wide apart, transverse, sub-parallel incisions. Length, $6\frac{1}{2}$ in.; breadth, $\frac{3}{8}$ in.

Boinji Tribe, Boulia. (See "Ethnological Studies," 1897, pl. 18, f. 327.)

- FIG. 3.—Paddle-shaped, thin, plano-convex, sharp-edged on the blade, handle rounded, apex obtusely pointed; light-coloured wood. *Obverse*—At the proximal and distal ends of the blade are a few transverse scratches. *Reverse*—Is chequered with similar delicate incisions. Length, 11 in.; blade $6\frac{1}{2}$ in. long; breadth, $\frac{3}{8}$ in.

Karenya Tribe, Boulia. (See "Ethnological Studies," 1897, pl. 18, f. 331.)

- FIG. 4.—Oblong, compressed, flat, sharp-edged, apices acutely pointed; light-coloured wood. *Obverse*—With eight groups of transverse incisions, of from three to eleven cuts in each; at one end partially chequered by a few longitudinal incisions. *Reverse*—Plain. Length, $5\frac{1}{2}$ in.; breadth, $\frac{3}{8}$ in.

Karenya Tribe, Boulia. (See "Ethnological Studies," 1897, pl. 18, f. 330.)

- FIG. 5.—Oblong, compressed, faintly bi-convex, square-ended, edges obtuse; light-coloured wood. *Obverse*—A large upper panel with a central longitudinal incision, crossed by oblique incisions from left to right, the incisions stopping short at and recommencing from the longitudinal one. A middle countersunk panel containing two extended "St. Andrew's crosses," and an oblique incision. The lower panel bears another similar cross of three incisions in each arm, &c. *Reverse*—Again three panels, the centre countersunk; the incisions are complicated, and can best be studied from the already published figure. Length, $4\frac{3}{4}$ in.; breadth, $\frac{3}{8}$ in.

Kalkadun Tribe, Leichhardt-Selwyn district. (See "Ethnological Studies," 1897, pl. 18, f. 333.)

- FIG. 6.—Oblong, compressed, bi-convex, edges sub-obtuse, blunt-ended, section long-oval; light-coloured wood. *Obverse*—Divided into six panels, five with five longitudinal, deep, incisions in each; the sixth panel plain. *Reverse*—At one end an M, at the other an N, with, between them, eight transverse incisions unequally spaced apart. Length, $5\frac{1}{2}$ in.; breadth, $\frac{3}{8}$ in.

Boinji Tribe, Boulia.

Made in place of Fig. 2, which was stated to have been lost, in order to ascertain whether the same "message" necessitated similar markings, which it clearly did not.

- FIG. 7.—Cylindrical, round, ruler-shaped; small; ends irregularly cut with a knife; light-coloured wood. Incised with three lines of transverse lenticular notches. Length, $2\frac{1}{2}$ in.; diameter, $\frac{3}{8}$ in.

Tarumbal Tribe, Rockhampton.

- FIG. 8.—A piece of round stick, with four irregular lines of transverse gaping notches; a very rough implement. Length, $3\frac{1}{2}$ in.; diameter, $\frac{3}{8}$ in.

Gladstone. Given by "Old Peter" as an authority to demand a fishing-net from his wife at Miriam Vale.

- FIG. 9.—Oblong, flat, compressed, edges squared or truncate, one end rounded, the other truncate; light wood. *Obverse*—Five conjoined elongate rhombs in relief longitudinally, four with incised crossbars. *Reverse*—Surface divided into rhombs and triangles by oblique incisions. Length, $3\frac{3}{8}$ in.; breadth, $\frac{3}{8}$ in.

Boulia. Made by Kunggari (Tambo district) boy, who was sent home sick from Llanrheidol.

- FIG. 10.—Roughly quadrangular, ends obtusely pointed; light-coloured wood. Entire surface divided into rhombs. Length, $4\frac{1}{8}$ in.; diameter, $\frac{3}{8}$ in.

Tully River. Made by Tully River boy, but possessed no meaning to the maker.

- FIG. 11.—Oblong, flat, compressed, edges sub-acute, ends sub-truncate; ruddled. *Obverse*—Two central rhombs and a half rhomb at each end, with triangles at sides; the four central figures and one triangle with transverse nicks, and six other nicks on the upper right-hand edge. *Reverse*—Two zigzag lateral incised lines with short transverse and oblique incisions irregularly placed. Length, $3\frac{3}{8}$ in.; breadth, 1 in.

Cloncurry. Made by a Maitakudi, at Fort Constantine, to send to his brother "Billy," at Cloncurry Police Barracks.

— 1s.]

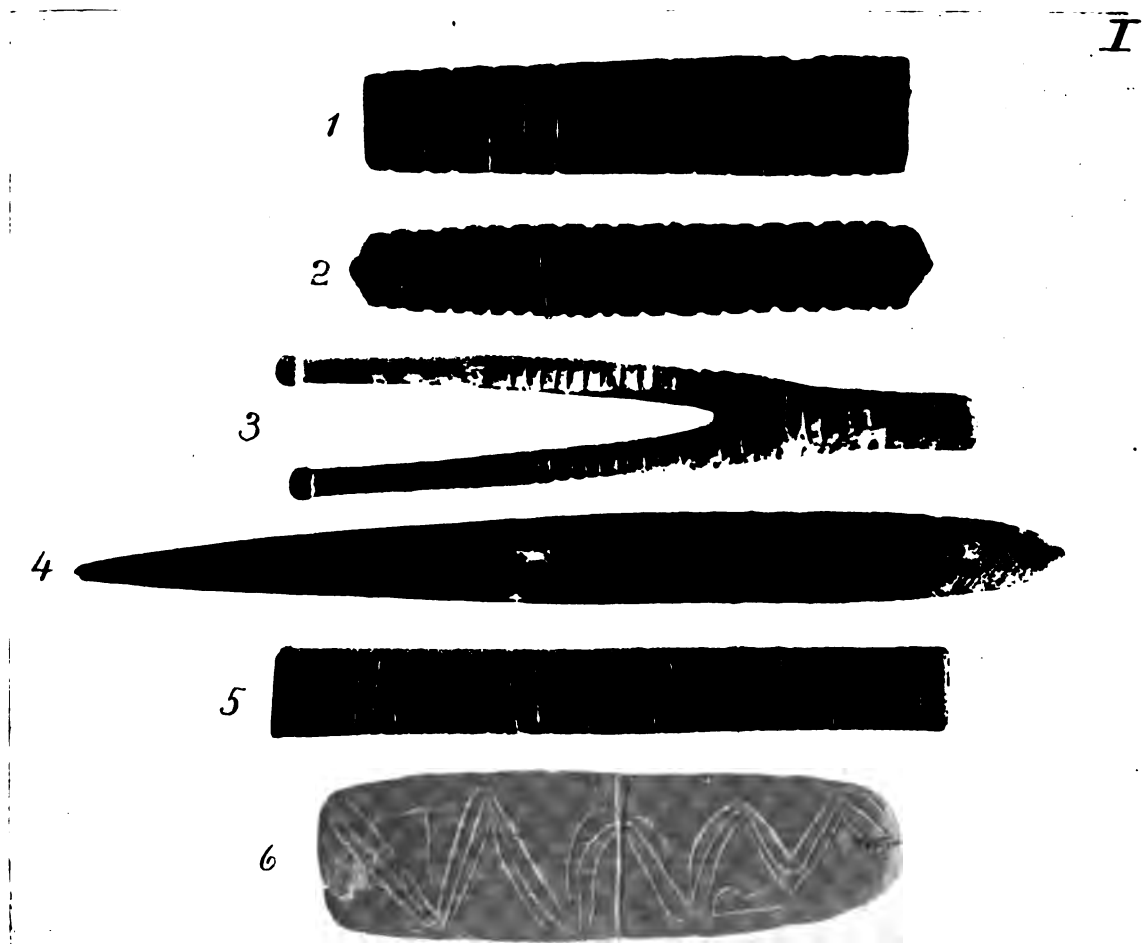


Plate I.

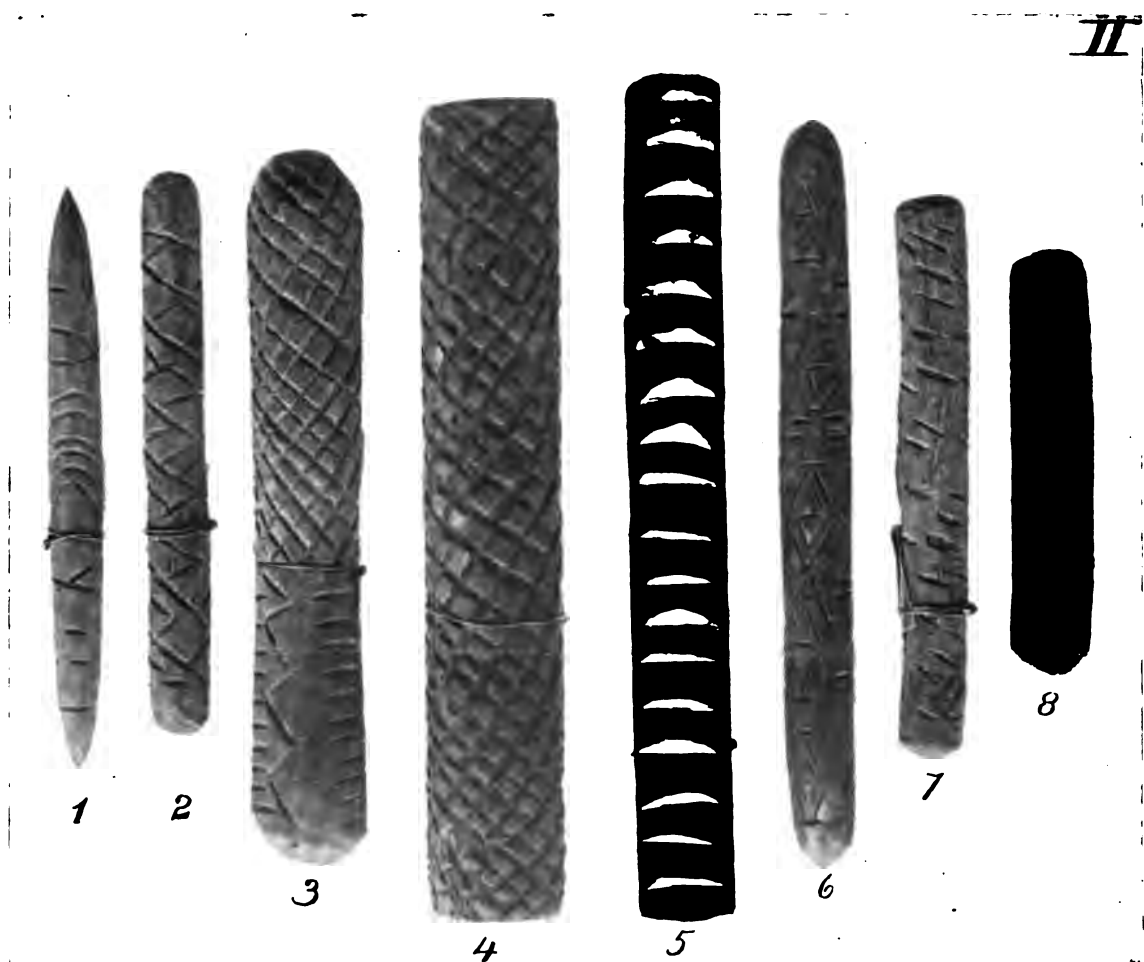


Plate II.

